Governo do Estado do Rio de Janeiro

Companhia Estadual de Águas e Esgotos do Rio de Janeiro

Diretoria Jurídica

CONTRATO Nº077/2023 (DSG)

CONTRATO CEDAE Nº 077/2023 (DSG) que entre si celebram a **COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS (CEDAE)** e a **DF TECNO-CIENTÍFICA LTDA.**

A **COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS,** sociedade de economia mista, com sede nesta Cidade, na Av. Presidente Vargas, 2655 – Cidade Nova – CEP 20.210-030, registrada na JUCERJA sob n.º 5.000, em 14 de agosto de 1975, inscrita no CNPJ/MF sob o n.º 33.352.394/0001-04, neste ato representada por meio de seus diretores ao final assinado, Sr. DANIEL BARBOSA OKUMURA – Diretor de Saneamento e Grande Operação e Sr. ANTONIO CARLOS DOS SANTOS – Diretor Financeiro e de Relações com Investidores, doravante denominada **CEDAE,** e **DF TECNO-CIENTÍFICA LTDA.**, sediada na Rua Vasomiro Malaquias de Barros, nº 67, salas 22 e 23, Jardim Satélite, São José dos Campos, São Paulo, CEP 12.231-642, inscrita no CNPJ sob o n.º 10.476.350/0001-82 neste ato por meio de seu sócio administrador WILSON ALVES COLVARA, daqui por diante denominada **CONTRATADA,** resolvem celebrar o presente Contrato com fundamento no **Processo Administrativo n.º SEI-150001/029273/2022,** mediante **Pregão Eletrônico nº 0021/2023**, que se regerá pelas normas da Lei nº 13.303, de 30 de junho de 2016, pelo que dispõe o Regulamento Interno de Licitações e Contratos da CEDAE - RILC, pelas normas da Lei Federal nº 10.520, de 17/07/2002, pelo Decreto Estadual nº 31.864, de 16/09/2002, pela Lei Estadual nº 287/79 (Código de Administração Financeira e Contabilidade Pública), pelo Decreto nº 3.149/80 e pela Lei Complementar Federal nº 123/2006, estando sujeito às disposições da Lei Estadual nª 7.53 de 27 de março de 2017, além das demais disposições legais aplicáveis, pelos preceitos de direito privado, bem como pelas cláusulas e condições seguintes:

CLÁUSULA PRIMEIRA - DO OBJETO

O presente contrato tem por objeto a **"AQUISIÇÃO DE PADRÕES DE CIANOTOXINAS EM ÁGUA"** , conforme Termo de Referência e proposta da **CONTRATADA**, autuados respectivamente sob o index 49334262 e no primeiro documento do index. 53536702 do processo administrativo de referência, que passam a integrar a presente contratação embora não transcritos.

CLÁUSULA SEGUNDA - DO PRAZO

O prazo máximo para fornecimento do objeto será de 02 (dois) meses, contados após a emissão da ordem de fornecimento da CEDAE.

PARÁGRAFO PRIMEIRO - O decurso do prazo estipulado não acarretará, por si só, a resolução do ajuste, continuando as partes contratualmente obrigadas até que se opere o aceite definitivo do objeto, respondendo a **CONTRATADA** pela mora a que der causa.

PARÁGRAFO SEGUNDO - O prazo ora previsto poderá ser alterado por acordo entre as partes, por meio de termo aditivo, devendo ser observado, neste caso, o disposto no art. 205 do RILC.

PARÁGRAFO TERCEIRO - Ocorrendo impedimento, paralisação ou sustação do contrato por ordem da CEDAE, o prazo de execução será automaticamente prorrogado por igual período, bastando o registro formal de interrupção no processo administrativo, conforme art. 206 do RILC.

PARÁGRAFO QUARTO - A prorrogação de prazo formalizada por culpa da **CONTRATADA** impedirá que o período acrescido à execução seja considerado para fins de reajuste.

CLÁUSULA TERCEIRA - DAS OBRIGAÇÕES DA CEDAE

Constituem obrigações da **CEDAE:**

a) efetuar os pagamentos devidos à **CONTRATADA**, nas condições estabelecidas neste contrato;

b) fornecer à **CONTRATADA** documentos, informações e demais elementos que possuir, vinculados à execução satisfatória do presente

contrato;

c) exercer a fiscalização do contrato;

d) aceitar provisória e definitivamente o objeto do contrato.

CLÁUSULA QUARTA - DAS OBRIGAÇÕES DA CONTRATADA

Constituem obrigações da **CONTRATADA**, além daquelas previstas no Termo de Referência:

a) entregar os bens observando a quantidade, qualidade, local e prazos especificados no termo de referência desta contratação, cujo teor integra o presente ajuste;

b) entregar o objeto do contrato sem qualquer ônus para a **CEDAE**, estando incluído no valor do pagamento todas e quaisquer despesas, tais como transporte, frete, embalagem, testes, seguros, carga e descarga e ainda quaisquer tributos de qualquer natureza que incidam sobre o fornecimento ora pactuado;

c) manter em estoque um mínimo de bens necessários à execução do contrato;

d) comunicar o Fiscal do contrato, por escrito, sobre qualquer problema ou impossibilidade de execução de qualquer obrigação contratual, para a adoção das providências cabíveis;

e) reparar, corrigir, remover, reconstruir ou substituir, no todo ou em parte, e às suas expensas, bens objeto do contrato em que se verificarem vícios, defeitos ou incorreções resultantes de execução irregular ou do fornecimento de materiais inadequados ou desconformes com as especificações;

f) indenizar todo e qualquer prejuízo causado à CEDAE ou a terceiros pela má execução do contrato;

g) atender, em prazo razoável, a todas as determinações formuladas pela Comissão de fiscalização da **CEDAE**; e

h) manter as condições de habilitação e qualificação inicialmente exigidas para esta contratação durante todo o período de vigência contratual.

I) atender todas as determinações da fiscalização da **CEDAE**;

j) responder pelo contrato na forma da lei.

k) A **CONTRATADA** deverá atender aos requisitos de sustentabilidade ambiental previstos no item 11 do Termo de Referência, Anexo II do Edital.

CLÁUSULA QUINTA - DO VALOR DO CONTRATO

A **CONTRATADA** se obriga a executar o objeto em regime de fornecimento integral pelo preço de **R$ 101.108,00 (cento e um mil e cento e oito reais)**, conforme proposta atualizada autuada sob o primeiro documento do index. 53536702 e tabela resumo abaixo:

Planilha de Custos Unitários					
ITENS	**QUAN.**	**UNID.**	**DESCRIÇÃO**	**PREÇO UNITÁRIO (R$)**	**PREÇO TOTAL (R$)**
1	2	UN.	**Padrão de Microcistina LR/ Descrição:** CRM-MCLR é uma solução de calibração certificada para a determinação de microcistina - LR. Cada ampola contém ~ 0,5 mL de solução MCLR dissolvido em metanol aquoso (1: 1 v / v) a uma concentração de 10,2 µmol por litro (~10,15 µg/mL ou ~11 µg/g). - Acompanha Certificado de Análise (MRC)/ **Modelo/ Código**: CRM-MCLR/ **Marca:** NRC Canadá/ **Fabricante:** National Research Council Canada/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
2	2	UN.	**Padrão de Saxitoxina/ Descrição:** CRM-STX-g é uma solução de calibração certificada de STX, 61.4 ± 2.4 µmol/L em ácido clorídrico aquoso 0,5 mM (~18.379 µg/L). Cada ampola contém ~ 0,5 mL de solução. - Acompanha Certificado de Análise (MRC)/ **Modelo/ Código:** CRM-STX / **Marca:** NRC Canadá/ **Fabricante:** National Research Council Canada/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
3	2	UN.	**Padrão Cilindrospermopsina/ Descrição:** CRM-CYN é uma solução de Calibração certificada para a determinação de cilindrospermopsina (CYN) por métodos de análise química. Cada ampola contém ~ 0,5 mL de solução com 30 µM (~12,46 µg/mL ou ~12,7 µg/g) de cilindrospermopsina em água filtrada e desionizada. - Acompanha Certificado de Análise (MRC) **Modelo/ Código:** CRM-CYN/ **Marca:** NRC Canadá/ **Fabricante:** National Research Council Canada/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
4	2	UN.	**Padrão Anatoxina-a/ Descrição:** CRM-ATX é uma solução de calibração certificada para a determinação de anatoxina-a (ATX-a) por métodos de análise química. Cada ampola contém ~ 0,5 mL de solução com 30 µM (~4,96 µg/mL ou ~5,03 µg/g) de anatoxina-a em metanol/água (9/91, v/v) com 0,01% de ácido acético. - Acompanha Certificado de Análise (MRC)/ **Modelo/ Código:** CRM-ATX/ **Marca:** NRC Canadá/ **Fabricante:** National Research Council Canada/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
5	2	UN.	**Padrão de Microcistina LF/ Descrição:** Frasco com 1,0mL. Concentração 10µg/ml, em metanol./ **Modelo/ Código:** PN300646/ **Marca:** Abraxis/ **Fabricante:** Abraxis/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
6	2	UN.	**Padrão de Microcistina LF/ Descrição:** Frasco com 1,0mL. Concentração 10µg/ml, em metanol./ **Modelo/ Código:** PN300582 / **Marca:** Abraxis/ **Fabricante:** Abraxis/ **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
7	2	UN.	**Padrão de Microcistina YR/ Descrição:** Frasco com 1,0mL. Concentração 10µg/ml, em metanol./ **Modelo/ Código:** PN300638 / **Marca:** Abraxis/ **Fabricante:** Abraxis / **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
VALOR TOTAL GERAL: R$ 101.108,00 (Cento e um mil e cento e oito reais)					

PARÁGRAFO PRIMEIRO - O preço ajustado inclui o lucro e todos os custos dos serviços, sejam diretos ou indiretos, responsabilizando-se a **CONTRATADA** por toda e qualquer despesa ainda que não prevista textualmente neste Contrato, inclusive a que decorrer de ato ou fato que implique em transgressão ou inobservância de qualquer dispositivo legal ou regulamentar, federal, estadual ou municipal.

PARÁGRAFO SEGUNDO - As despesas com a execução do presente contrato correrão à conta das seguintes dotações orçamentárias, para o corrente exercício de 2023, assim classificados:

Programa de Trabalho: 2200022016
Conta Contábil: 411110206
Fonte de Recursos: 10
Código Orçamentário: 33903006
Centro de Custos: DG00010000
ID da Reserva Orçamentária: 2023000693

CLÁUSULA SEXTA - CONDIÇÕES PARA PAGAMENTO

O(s) pagamento(s) à **CONTRATADA** será(ão) realizado(s) no prazo máximo de até 30 (trinta) dias, contados do recebimento provisório pela Comissão de Fiscalização, previsto na cláusula décima-quarta e conforme cronograma físico financeiro inserido sob o index. 54753548 do processo administrativo de referência.

PARÁGRAFO PRIMEIRO - A **CONTRATADA** é obrigada a reparar, corrigir, remover, reconstituir ou substituir, a suas expensas, no total ou em parte, o objeto do contrato em que se verificarem vícios, defeitos ou incorreções resultantes da execução ou dos materiais empregados. Os bens ou os materiais cujos padrões de qualidade e desempenho estejam em desacordo com a especificação serão recusados pelo responsável pela execução e fiscalização do contrato, que anotará em registro próprio as ocorrências e determinará o que for necessário à regularização das faltas ou defeitos observados. No que exceder à sua competência, comunicará o fato à autoridade superior, em 05 (cinco) dias, para ratificação.

PARÁGRAFO SEGUNDO - A **CONTRATADA** declara, antecipadamente, aceitar todas as condições, métodos e processos de inspeção, verificação e controle adotados pela fiscalização, obrigando-se a fornecer todos os dados, elementos, explicações, esclarecimentos e comunicações de que esta necessitar e que forem julgados necessários ao desempenho de suas atividades.

PARÁGRAFO TERCEIRO - A fiscalização efetuada pela **CEDAE** não excluirá ou atenuará a responsabilidade da **CONTRATADA**, nem a eximirá de manter fiscalização própria.

PARÁGRAFO QUARTO - A verificação, pela Comissão de Fiscalização, de qualquer irregularidade no(s) objeto(s) entregue(s) ***impedirá o seu recebimento provisório***, ficando consequentemente suspenso o prazo para pagamento, que somente voltará a correr quando solucionado o problema.

PARÁGRAFO QUINTO - A suspensão do prazo para pagamento será efetuada na data em que ocorrer a notificação formal da **CONTRATADA** acerca da irregularidade/pendência constatada, podendo ser realizada por meio de correspondência eletrônica.

PARÁGRAFO SEXTO - Os pagamentos devidos serão efetuados pela **CEDAE** mediante crédito em conta bancária indicada pela **CONTRATADA** no banco **BRADESCO**, ficando autorizada a indicação de outra conta somente quando justificada tal impossibilidade.

PARÁGRAFO SÉTIMO - Os pagamentos eventualmente realizados com atraso, desde que não decorram de ato ou fato atribuível à **CONTRATADA**, sofrerão a incidência de atualização financeira pelo IGP-M e juros moratórios de 0,5% (meio por cento) ao mês, calculados *pro rata die,* e aqueles pagos em prazo inferior ao estabelecido neste contrato, serão feitos mediante desconto de 2% (dois por cento) ao mês, *pro rata die. Os juros e a atualização previstos neste parágrafo não correrão durante o período de suspensão do prazo para pagamento.*

CLÁUSULA SÉTIMA - DA SUBCONTRATAÇÃO

Não será admitida a subcontratação na execução deste contrato.

CLÁUSULA OITAVA - DA IMPOSSIBILIDADE DE MODIFICAÇÃO DO CONTRATO PELA SUPRESSIO

O atraso, a tolerância ou a omissão da **CEDAE** no exercício de suas prerrogativas jamais ensejará a modificação automática das cláusulas avençadas, não sugerindo qualquer renúncia de direitos por parte desta que poderá exercê-los a qualquer tempo.

CLÁUSULA NONA - DA ALTERAÇÃO DO CONTRATO

Este contrato poderá ser alterado por acordo entre as partes, formalizado por meio de Termo Aditivo, com observância do disposto nos art. 209 a 211 do RILC.

PARÁGRAFO ÚNICO - As alterações que se fizerem necessárias nas quantidades ou qualidade do serviço contratado deverão observar os limites do §1º do art. 81 da Lei 13.303/2016.

CLÁUSULA DÉCIMA - DO REAJUSTE

O valor do fornecimento será irreajustável durante toda a vigência do contrato.

CLÁUSULA DÉCIMA-PRIMEIRA - DAS SANÇÕES ADMINISTRATIVAS E DEMAIS PENALIDADES

A inexecução dos serviços, total ou parcial, a execução imperfeita, a mora na execução ou qualquer inadimplemento ou infração contratual sujeitará a **CONTRATADA**, sem prejuízo da responsabilidade civil ou criminal que lhe couber, às penalidades seguintes:

a) advertência;

b) multa administrativa;

c) suspensão temporária da participação em licitação e impedimento de contratar com a CEDAE por prazo não superior a 2 (dois) anos;

Parágrafo Primeiro - A sanção administrativa deve ser determinada de acordo com a natureza e a gravidade da falta cometida.

Parágrafo Segundo - Todas as sanções previstas no caput serão impostas pelo Diretor responsável, na forma do art. 21, §1º, do Procedimento de aplicação de sanções da CEDAE.

Parágrafo Terceiro - A multa administrativa, prevista na alínea "b" do caput, será aplicada à CONTRATADA pelo descumprimento de suas obrigações acessórias, observando o que segue:

i) corresponderá ao valor de até 5% (cinco por cento), aplicada de acordo com a gravidade da infração e proporcionalmente às parcelas não executadas, a contar da data da infração;

i.1.) Nas infrações cometidas após o encerramento do contrato, a base de cálculo será o valor da contratação.

ii) nas reincidências específicas, deverá corresponder, no mínimo, ao dobro do valor da que tiver sido inicialmente imposta;

iii) O somatório das multas administrativas deverá observar o limite de 20% (vinte por cento) do valor do contrato ou do empenho.

iv) poderá ser aplicada cumulativamente a qualquer outra penalidade; e

v) não tem caráter compensatório, não se confundindo, portanto, com as multas por atraso, com a multa rescisória e com a multa prevista na cláusula décima oitava, que poderão ser aplicadas cumulativamente à multa administrativa.

Parágrafo Quarto - A suspensão temporária da participação em licitação e impedimento de contratar, prevista na alínea "c", do caput desta cláusula, será aplicada conforme as disposições do art. 9º do Procedimento de Aplicação de Sanções da CEDAE, observando o seguinte:

i. Não poderá ser aplicada em prazo superior a 2 (dois) anos;

ii. Sem prejuízo de outras hipóteses, deverá ser aplicada quando o adjudicatário faltoso, sancionado com multa, não realizar o depósito deste valor no prazo devido;

Parágrafo Quinto - A aplicação das penalidades acima referidas, em virtude das infrações contratuais retro mencionadas, não importará em renúncia, por parte da **CEDAE,** da faculdade de declarar rescindido o contrato, se assim entender conveniente ao interesse público.

Parágrafo Sexto - O atraso injustificado no cumprimento das obrigações contratuais sujeitará a **CONTRATADA** à **multa de mora** por dia útil que exceder ao prazo estipulado, conforme percentuais abaixo:

a) 0,33% (trinta e três centésimos por cento) por dia de atraso, calculado sobre o valor correspondente à parte inadimplente, até o limite de 9,9%, correspondente a até 30 (trinta) dias de atraso; e

b) 0,66 % (sessenta e seis centésimos por cento) por dia de atraso, calculado sobre o valor correspondente à parte inadimplente, quando o atraso ultrapassar 30 (trinta) dias, até o limite máximo de 20%.

Parágrafo Sétimo - As multas porventura aplicadas serão consideradas dívidas líquidas e certas, ficando a **CEDAE** autorizada a descontá-las das garantias prestadas, e caso estas sejam insuficientes, dos pagamentos devidos à **CONTRATADA;** ou ainda, quando for o caso, cobrá-las judicialmente, servindo para tanto, o instrumento contratual como título executivo extrajudicial.

Parágrafo Oitavo - A intimação do interessado deverá indicar o prazo e o local para a apresentação de defesa.

I) A defesa prévia do interessado será exercida no prazo de 10 (dez) dias úteis, na forma prevista no art. 26, §§ 3º e 5º do Procedimento de Aplicação de Sanções da CEDAE.

Parágrafo Nono - Será emitida decisão conclusiva sobre a aplicação ou não da sanção, pela autoridade competente, devendo ser apresentada a devida motivação, com a demonstração dos fatos e dos respectivos fundamentos jurídicos.

Parágrafo Décimo - Todas as multas previstas neste contrato, incluindo a rescisória e a prevista na cláusula décima oitava, serão somadas quando aplicadas cumulativamente, e terão como limite seus respectivos percentuais máximos.

CLÁUSULA DÉCIMA-SEGUNDA - DA RESCISÃO CONTRATUAL

A inexecução total ou parcial do contrato poderá ensejar a sua rescisão com as consequências cabíveis.

PARÁGRAFO PRIMEIRO - A rescisão contratual poderá ocorrer por:

I - Ato unilateral e escrito, quando verificada a ocorrência de qualquer das situações descritas no art. 222 do RILC;

II - Acordo entre as partes, reduzido a termo no processo de contratação, desde que seja vantajoso à CEDAE; ou

III - decisão judicial ou arbitral.

PARÁGRAFO SEGUNDO - Os casos de rescisão contratual deverão ser formalmente motivados nos autos do processo administrativo que ensejou a contratação, sendo assegurado à **CONTRATADA** o direito ao contraditório e ampla defesa.

PARÁGRAFO TERCEIRO - Quando a rescisão ocorrer por interesse exclusivo da **CEDAE**, sem que haja culpa da **CONTRATADA**, esta será ressarcida dos prejuízos que houver sofrido.

PARÁGRAFO QUARTO - A rescisão por ato unilateral da **CEDAE**, quando justificada no descumprimento de obrigações contratuais por parte da **CONTRATADA**, acarretará a aplicação de multa rescisória, no percentual de 10% (dez por cento) calculada sobre o saldo reajustado do contrato, bem como a execução da garantia contratual e/ou a utilização dos créditos decorrentes do próprio contrato.

PARÁGRAFO QUINTO - A **CEDAE** se reserva o direito de cobrar indenização suplementar em juízo se ficar constatado que o prejuízo causado foi superior ao valor da multa rescisória aplicada, conforme autorização contida no art. 416, parágrafo único, *in fine,* do Código Civil.

PARÁGRAFO SEXTO - A rescisão contratual por acordo entre as partes será da competência da autoridade referida no art. 25 do RILC; enquanto a rescisão unilateral ficará a cargo do Diretor responsável pela contratação, conforme art. 15 do Procedimento Interno de Sanções da CEDAE.

PARÁGRAFO SÉTIMO - A contratada manifesta previamente que, na hipótese de a CEDAE reduzir suas operações em face do Projeto de Universalização e Desestatização do Saneamento Básico no Estado do Rio de Janeiro, aceitará a redução qualitativa ou quantitativa proposta pela CEDAE ou ainda a rescisão unilateral, desde que mediante comunicação por escrito e com pelo menos 30 (trinta) dias de antecedência, renunciando a Contratada antecipadamente a qualquer direito, nessas situações, à indenização ou compensação.

CLÁUSULA DÉCIMA-TERCEIRA - DO RECURSO AO JUDICIÁRIO

As importâncias decorrentes de quaisquer penalidades impostas à **CONTRATADA**, inclusive as perdas e danos ou prejuízos que a execução do contrato tenha acarretado, quando superiores à garantia prestada ou aos créditos que a **CONTRATADA** tenha em face da **CEDAE**, que não comportarem cobrança amigável, serão cobrados judicialmente.

PARÁGRAFO ÚNICO - Caso a **CEDAE** tenha de recorrer ou comparecer a Juízo para haver o que lhe for devido, a **CONTRATADA** ficará sujeita ao pagamento, além do principal do débito, da pena convencional de 10% (dez por cento) sobre o valor do litígio, dos juros de mora de 1% (um por cento) ao mês, despesas de processo e honorários de advogado, estes fixados, desde logo, em 20% (vinte por cento) sobre o valor em litígio.

CLÁUSULA DÉCIMA-QUARTA - DA ACEITAÇÃO PROVISÓRIA DO OBJETO

A aceitação provisória nos contratos de aquisição ocorrerá conforme o número de parcelas de fornecimento, mediante o recebimento do material no almoxarifado da Companhia ou fora deste, observando-se os seguintes procedimentos:

PARÁGRAFO PRIMEIRO - Os materiais e equipamentos entregues no almoxarifado serão recepcionados e devidamente conferidos pelo Chefe do Almoxarifado. Em seguida, deverão sofrer inspeção técnica por parte do Departamento de Pesquisa de Material – GSU-2 e, posteriormente, pela Comissão de Fiscalização do Contrato, que os aceitarão provisoriamente pela emissão do TERMO DE RECEBIMENTO E INSPEÇÃO DE MATERIAL (doc. Ref. ANEXO IV da Ordem de Serviço "E" n. 14.693/2017).

PARÁGRAFO SEGUNDO - Os materiais e equipamentos entregues fora do almoxarifado serão recepcionados por pelo menos um dos membros da Comissão de Fiscalização do Contrato, que será responsável pela verificação das conformidades, validando a aceitação destes, pela emissão do TERMO DE ACEITAÇÃO PARA RECEBIMENTO DE MATERIAL FORA DO ALMOXARIFADO (doc. Ref. ANEXO V da Ordem de Serviço "E" n. 14.693/2017).

PARÁGRAFO TERCEIRO - A documentação acessória aos Termos de Recebimento será a estabelecida pela Gerência de Suprimento, bem como os demais procedimentos e prazos implicados nesse processo.

PARÁGRAFO QUARTO - Para o pagamento de cada nota fiscal será obrigatória a apresentação do(s) citado(s) Termo(s) de Recebimento aprovado(s).

PARÁGRAFO QUINTO - O recebimento de materiais e equipamentos de valor superior a R$ 150.000,00 deverá ser realizado por uma comissão de, no mínimo, 3 (três) membros, conforme OS "E" nº 14.693/2017.

PARÁGRAFO SEXTO - Todos os documentos mencionados nesta cláusula ficarão autuados no processo administrativo referente à contratação, bem como no processo de prestação de contas que deverá ser aberto em virtude da OS "E" nº 14.695/2017.

CLÁUSULA DÉCIMA-QUINTA - DA ACEITAÇÃO DEFINITIVA DO OBJETO

O objeto do contrato será recebido definitivamente ao final, mediante emissão do TERMO DE ACEITAÇÃO DEFINITIVA, que será

produzido após a verificação da qualidade e quantidade da totalidade do material entregue, observando-se as seguintes etapas:

PARÁGRAFO PRIMEIRO - Nos casos de contratos de ATÉ R$ 1 MILHÃO, o Gerente do Contrato solicitará à Comissão de Fiscalização designada o Formulário de Acompanhamento da Execução do Contrato (ANEXO II, IN AGE N.º 30), devidamente preenchido e assinado.

PARÁGRAFO SEGUNDO - Em seguida, procederá à verificação dos Aceites Provisórios emitidos e, inexistindo impropriedades, emitirá e assinará o Termo de Aceitação Definitiva.

PARÁGRAFO TERCEIRO - Nos casos de contratos de VALOR SUPERIOR A R$ 1 MILHÃO E INFERIOR A R$ 37,5 MILHÕES, o Gerente do Contrato, além de observar os parágrafos primeiro e segundo desta cláusula, submeterá o Termo emitido à apreciação e assinatura do Diretor da área gestora do contrato. Nesse caso, o Coordenador da Comissão de Fiscalização do Contrato também assinará o Termo de Aceitação Definitiva.

PARÁGRAFO QUARTO - O prazo para emissão do Termo de Aceitação Definitiva será aquele descrito no item 2.2.4 da Ordem de Serviço "E" n. 14.693/17.

CLÁUSULA DÉCIMA-SEXTA - DA PUBLICAÇÃO

O extrato desta contratação será publicado no Diário Oficial do Estado do Rio de Janeiro, para fins de mera publicidade, e posteriormente divulgado no sítio eletrônico da **CEDAE**.

PARÁGRAFO ÚNICO - Após a publicação no Diário Oficial, deverá ser observado o disposto na Deliberação TCE-RJ n. 312/2021 para o envio das informações nos casos exigidos.

CLÁUSULA DÉCIMA-SÉTIMA - DAS MEDIDAS DE INTEGRIDADE - LEI ESTADUAL 7.753/2017

PARÁGRAFO PRIMEIRO - Na execução do presente Contrato é vedado às partes, dentre outras condutas:

a) prometer, oferecer ou dar, direta ou indiretamente, vantagem indevida a agente público ou a quem quer que seja;

b) criar, de modo fraudulento ou irregular, pessoa jurídica para celebrar o presente Contrato;

c) obter vantagem ou benefício indevido, de modo fraudulento, de modificações ou prorrogações do presente Contrato, sem autorização em lei, no ato convocatório da licitação pública ou nos respectivos instrumentos contratuais;

d) manipular ou fraudar o equilíbrio econômico-financeiro do presente Contrato; ou

e) de qualquer maneira fraudar o presente Contrato; assim como realizar quaisquer ações ou omissões que constituam prática ilegal ou de corrupção, nos termos da Lei nº 12.846/2013 (conforme alterada) ou de quaisquer outras leis ou regulamentos aplicáveis ("Leis Anticorrupção"), ainda que não relacionadas com o presente Contrato.

PARÁGRAFO SEGUNDO - A **CONTRATADA** compromete-se a respeitar, cumprir e fazer cumprir, no que couber, o **Código de Ética e Conduta da CEDAE, presente no link** www.cedae.com.br/governancacorporativa.

PARÁGRAFO TERCEIRO - A violação aos parágrafos primeiro e segundo pelos administradores, empregados ou prestadores de serviços da **CONTRATADA**, a depender da gravidade da infração e dos danos causados à CEDAE, acarretará na aplicação das sanções administrativas previstas no contrato, rescisão unilateral e/ou ressarcimento de perdas e danos apurados.

PARÁGRAFO QUARTO - A comunicação imediata à CEDAE de eventual violação aos parágrafos primeiro e segundo, acompanhada das medidas tomadas pela **CONTRATADA,** suficientes para sanar a violação, desde que preservados os negócios da CEDAE, sua imagem e reputação, serão consideradas como atenuantes para o fim previsto no parágrafo anterior.

PARÁGRAFO QUINTO - A **CONTRATADA** se obriga a possuir e manter programa de integridade nos termos da disciplina conferida pela Lei Estadual n.° 7.753/2017 e eventuais modificações e regulamentos subsequentes, consistindo tal programa no "*conjunto de mecanismos e procedimentos internos de integridade, auditoria e incentivo à denúncia de irregularidades e na aplicação efetiva de códigos de ética e de conduta, políticas e diretrizes com o objetivo de detectar e sanar desvios, fraudes, irregularidades e atos ilícitos praticados contra a Administração Pública*".

PARÁGRAFO SEXTO - O programa de integridade será obrigatório nos contratos com prazo de vigência igual ou superior a 180 (cento e oitenta) dias cujo valor ultrapasse R$ 650.000,00 (seiscentos e cinquenta mil reais), para compras e serviços, ou R$ 1.500.000,00 (um milhão e quinhentos mil reais), para obras e serviços de engenharia; sendo facultativo nos demais casos.

PARÁGRAFO SÉTIMO - A **CONTRATADA** que não possuir o programa de integridade já implantado deverá constituí-lo no prazo de até 180 (cento e oitenta) dias contados da assinatura deste contrato.

PARÁGRAFO OITAVO - O não atendimento ao disposto no parágrafo sétimo implicará na aplicação de multa moratória de 0,02%, por dia, incidente sobre o valor do contrato.

PARÁGRAFO NONO - O montante correspondente à soma dos valores básicos das multas moratórias será limitado a 10% do valor do contrato.

PARÁGRAFO DÉCIMO - O não cumprimento da exigência durante o período contratual acarretará na impossibilidade da contratação da empresa com a Administração Direta e Indireta do Estado do Rio de Janeiro até a sua regular situação.

PARÁGRAFO DÉCIMO-PRIMEIRO - O cumprimento da exigência da implantação não implicará ressarcimento das multas aplicadas.

PARÁGRAFO DÉCIMO-SEGUNDO - Caberá ao Gerente do Contrato, sem prejuízo de suas demais atribuições, conforme estabelecido no artigo 11 da Lei Estadual 7.753 de 02/10/2017, fiscalizar a aplicabilidade de seus dispositivos.

PARÁGRAFO DÉCIMO-TERCEIRO - As ações e deliberações do Gerente do Contrato não poderão implicar interferência na gestão das empresas nem ingerência de suas competências, devendo ater-se a responsabilidade de aferir a implantação do Programa de Integridade por meio de prova documental emitida pela **CONTRATADA**."

PARÁGRAFO DÉCIMO-QUARTO - A prática de atos de contra a Administração Pública Estadual sujeitará a **CONTRATADA** às sanções previstas na Lei Federal nº 12.846/2013, na forma do Decreto Estadual n. 46.366/2018.

CLÁUSULA DÉCIMA-OITAVA - DA CONFIDENCIALIDADE E DA PROTEÇÃO DE DADOS PESSOAIS

A **CEDAE** e a **CONTRATADA** se comprometem a proteger os direitos fundamentais de liberdade e de privacidade e o livre desenvolvimento da personalidade da pessoa natural, relativos ao tratamento de dados pessoais, inclusive nos meios digitais, garantindo que:

a) o tratamento de dados pessoais, se houver, dar-se-á de acordo com as bases legais previstas nas hipóteses dos arts. 7º, 11 e/ou 14 da Lei 13.709/2018 (LGPD), e para propósitos legítimos, específicos, explícitos e informados ao titular;

b) o tratamento seja limitado às atividades necessárias para a estrita execução do Contrato ou, quando for o caso, ao cumprimento de obrigação legal ou regulatória, no exercício regular de direito, por determinação judicial ou por requisição da ANPD;

c) Caso a coleta de dados pessoais dos usuários se faça indispensável ao cumprimento do próprio contrato, o seu acesso será solicitado diretamente pela **CONTRATADA** aos titulares, após prévia aprovação da **CEDAE**; responsabilizando-se a **CONTRATADA** pela sua gestão. Os dados coletados só poderão ser utilizados na execução do objeto especificado neste contrato, e em hipótese alguma poderão ser compartilhados ou utilizados para outras finalidades;

d) os dados obtidos em razão deste contrato serão armazenados em um banco de dados seguro, com garantia de registro das transações realizadas na aplicação de acesso (*log*), adequado controle baseado em função (*role based access control*) e com transparente identificação do perfil dos credenciados, tudo estabelecido como forma de garantir inclusive a rastreabilidade de cada transação e a franca apuração, a qualquer momento, de desvios e falhas, vedado o compartilhamento desses dados com terceiros; e

e) encerrada a vigência do contrato ou não havendo mais necessidade de utilização dos dados pessoais, sensíveis ou não, a **CONTRATADA** interromperá o tratamento dos dados e, em no máximo 30 (trinta) dias, sob instruções e na medida do determinado pela **CEDAE**, eliminará completamente os dados pessoais e todas as cópias porventura existentes (em formato digital, físico ou outro qualquer), salvo quando necessite mantê-los para cumprimento de obrigação legal ou outra hipótese legal prevista na LGPD.

PARÁGRAFO PRIMEIRO - A **CONTRATADA** dará conhecimento formal aos seus empregados das obrigações e condições acordadas nesta cláusula, inclusive no tocante à Política de Privacidade da **CEDAE**, cujos princípios deverão ser aplicados à coleta e tratamento dos dados pessoais de que trata a presente cláusula.

PARÁGRAFO SEGUNDO - O Encarregado pelo tratamento de dados pessoais da **CONTRATADA** manterá contato formal com o Encarregado da **CEDAE**, no prazo de até 24 (vinte e quatro) horas da ocorrência de qualquer incidente que implique violação ou risco de violação de dados pessoais, para que este possa adotar as providências devidas, na hipótese de questionamento das autoridades competentes.

PARÁGRAFO TERCEIRO - A critério do Encarregado pelo tratamento de dados da **CEDAE**, a **CONTRATADA** poderá ser provocada a colaborar na elaboração do relatório de impacto à proteção de dados pessoais (RIPD), conforme a sensibilidade e o risco inerente dos serviços objeto deste contrato, no tocante a dados pessoais.

PARÁGRAFO QUARTO - A **CONTRATADA** e seus empregados se obrigarão a manter, mesmo após o término da vigência contratual, a mais absoluta confidencialidade sobre dados e informações disponibilizados ou conhecidos em decorrência deste contrato.

PARÁGRAFO QUINTO - A **CONTRATADA** e seus empregados ficarão terminantemente proibidos de fazer uso ou revelação, sob nenhuma justificativa, a respeito de qualquer informação, dados, processos, fórmulas, códigos, cadastros, fluxogramas, diagramas lógicos, dispositivos, modelos ou elementos de propriedade da **CEDAE**, ou de seus Clientes, aos quais tiver acesso em decorrência do objeto desta contratação.

PARÁGRAFO SEXTO - A **CONTRATADA** e seus empregados deverão obedecer às normas sobre confidencialidade e segurança adotadas pela **CEDAE**, além das cláusulas específicas constantes neste instrumento contratual.

PARÁGRAFO SÉTIMO - A **CONTRATADA** responderá pelo descumprimento das obrigações relacionadas com a confidencialidade das informações, ocorridas durante ou após a vigência contratual, mediante ações ou omissões intencionais ou acidentais de seus empregados e dirigentes.

CLÁUSULA DÉCIMA-NONA - FORO

Para dirimir quaisquer questões porventura decorrentes deste Contrato, as partes elegem o foro da Comarca da Capital do Rio de Janeiro, com renúncia a qualquer outro, por mais privilegiado que seja.

E para que o presente instrumento produza os efeitos legais e de direito as partes assinam eletronicamente o presente contrato digital depois de lido e achado conforme, dispensando a exigência de testemunhas.

Pela **CEDAE**:

DANIEL BARBOSA OKUMURA
Diretor de Saneamento e Grande Operação

ANTONIO CARLOS DOS SANTOS
Diretor Financeiro e de Relações com investidores

Pela **CONTRATADA**:

WILSON ALVES COLVARA
Sócio Administrador

Rio de Janeiro, 11 julho de 2023

Documento assinado eletronicamente por **Daniel Barbosa Okumura**, **Diretor**, em 11/07/2023, às 23:18, conforme horário oficial de Brasília, com fundamento nos art. 21º e 22º do Decreto nº 46.730, de 9 de agosto de 2019.

Documento assinado eletronicamente por **Wilson Alves Colvara**, **Usuário Externo**, em 12/07/2023, às 14:35, conforme horário oficial de Brasília, com fundamento nos art. 21º e 22º do Decreto nº 46.730, de 9 de agosto de 2019.

Documento assinado eletronicamente por **Antonio Carlos dos Santos**, **Diretor Financeiro**, em 12/07/2023, às 15:40, conforme horário oficial de Brasília, com fundamento nos art. 21º e 22º do Decreto nº 46.730, de 9 de agosto de 2019.

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Avenida Presidente Vargas, 2655 - Bairro Cidade Nova, Rio de Janeiro/RJ, CEP 20210-030
Telefone:

TERMO DE REFERÊNCIA

AQUISIÇÃO DE PADRÕES DE CIANOTOXINAS EM ÁGUA

1. OBJETO

1.1. Aquisição de padrões de cianotoxinas em água conforme especificado neste Termo de Referência.

2. JUSTIFICATIVA

2.1. A Portaria 888 do Ministério da Saúde determina a realização de análise de microcistina e saxitoxina na água da Captação, com frequência semanal, quando a densidade de cianobactérias exceder 20.000 células/ml e na água tratada quando se confirmar a presença de toxinas na água captada. A análise de cilindrospermopsina é exigida quando for detectada a presença de gêneros de cianobactérias potencialmente produtores desta toxina. Já a análise de anatoxina, mesmo não sendo mencionada na Portaria 888, também é analisada quanto a presença de gêneros de cianobactérias potencialmente produtores desta toxina.

2.2. Cianotoxinas são metabólitos tóxicos aos seres humanos que são produzidas por Cianobactérias. Dentre os diferentes tipos de toxinas que as cianobactérias podem produzir, as mais preocupantes para a saúde pública são a microcistina, saxitoxina, cilindrospermopsina e anatoxina. Muitos casos de intoxicação já foram descritos no mundo, sendo o mais conhecido o caso de Caruaru–PE em 1996, quando cerca de 60 pacientes renais crônicos vieram a falecer pela exposição à cianotoxinas.

2.3. A microcistina e a cilindrospermopsina são classificadas como hepatotoxinas, devido ao seu mecanismo de ação, que afeta diretamente o fígado. Os sintomas de envenenamento com hepatotoxinas incluem anorexia, diarreia, palidez nas mucosas, vômitos, fraqueza e morte, dependendo da dose, decorrentes de hemorragia intra-hepática, necrose e desintegração da estrutura do fígado.

2.4. A saxitoxina é classificada como neurotoxina, por atuar especificamente no sistema nervoso. A ingestão dessa toxina pode causar uma série de sintomas, como tontura, adormecimento da boca e extremidades, fraqueza muscular, náusea, vômito, sede e taquicardia, podendo levar à morte.

2.5. A Anatoxina é um alcalóide neurotóxico produzido por algumas espécies de cianobactérias. Em humanos e outros animais, as junções do esqueleto neuromuscular constituem o alvo principal da Anatoxina. Os sintomas começam 5 minutos após a ingestão da Anatoxina e progridem rapidamente, resultando em cianose, convulsão, arritmia cardíaca e paralisia respiratória que finalmente leva a morte por sufocamento.

2.6. Os materiais a serem adquiridos são bens de natureza comum, pois seus padrões de desempenhos e qualidade estão bem definidos em suas especificações, e conhecidos pelo mercado que os comercializam, sendo adequada a realização de licitação na modalidade Pregão Eletrônico, conforme Lei Federal nº 10.520/2002.

3. ESPECIFICAÇÃO DO MATERIAL

3.1. Especificação do Objeto

Itens	Código IFS	Nomenclatura	Unidade	Quantidade
01	1068130274	SOLUÇÃO PADRÃO DE MICROCISTINA LR	UN	2
PADRÃO DE MICROCISTINA LR; CRM - MCLR É SOLUÇÃO DE CALIBRAÇÃO CERTIFICADA PARA A DETERMINAÇÃO DE MICROCISTINA - LR; EMBALAGEM: ÂMPOLA COM APROXIMADAMENTE 0,5mL DE SOLUÇÃO MCLR DISSOLVIDO EM METANOL AQUOSO (1:1 V/V); CONCENTRAÇÃO: ENTRE DE 11µg/mL E 12µg/mL; DEVERÁ SER FORNECIDO CERTIFICADO DE ANÁLISE (MRC - MATERIAL DE REFERÊNCIA CERTIFICADO). REFERÊNCIA: NRC CANADÁ / EUROFINS ABRAXIS OU SIMILAR OU DE MELHOR QUALIDADE.			
02	1068130275	SOLUÇÃO PADRÃO DE SAXITOXINA	UN	2
PADRÃO DE SAXITOXINA; CRM-STX-G É SOLUÇÃO DE CALIBRAÇÃO CERTIFICADA DE STX, 61,4 ± 2,4µmol/L EM ÁCIDO CLORÍDRICO AQUOSO 0,5 mM; EMBALAGEM: ÂMPOLA DE APROXIMADAMENTE 0,5mL; CONCENTRAÇÃO: ENTRE 17µg/L E 19µg/L; DEVERÁ SER FORNECIDO CERTIFICADO DE ANÁLISE (MRC - MATERIAL DE REFERÊNCIA CERTIFICADO). REFERÊNCIA: NRC CANADÁ / EUROFINS ABRAXIS OU SIMILAR OU DE MELHOR QUALIDADE.			
03	1068130273	SOLUÇÃO PADRÃO DE CILINDROSPERMOPSINA	UN	2
PADRÃO DE CILINDROSPERMOPSINA; CRM-CYN É SOLUÇÃO DE CALIBRAÇÃO CERTIFICADA PARA A DETERMINAÇÃO DE CILINDROSPERMOPSINA (CYN) POR MÉTODOS DE ANÁLISE QUÍMICA; EMBALAGEM: ÂMPOLA COM APROXIMADAMENTE 0,5mL DE SOLUÇÃO COM 30µM DE CILINDROSPERMOPSINA EM ÁGUA FILTRADA E DEIONIZADA; CONCENTRAÇÃO: ENTRE 12µg/mL E 13µg/mL; DEVERÁ SER FORNECIDO CERTIFICADO DE ANÁLISE (MRC - MATERIAL DE REFERÊNCIA CERTIFICADO). REFERÊNCIA: NRC CANADÁ / EUROFINS ABRAXIS OU SIMILAR OU DE MELHOR QUALIDADE.			
04	1068130272	SOLUÇÃO PADRÃO DE ANATOXINA	UN	2
PADRÃO DE ANATOXINA; CRM-ATX É SOLUÇÃO DE CALIBRAÇÃO CERTIFICADA PARA A DETERMINAÇÃO DE ANATOXINA-A (ATX-A) POR MÉTODOS DE ANÁLISE QUÍMICA; EMBALAGEM: ÂMPOLA COM APROXIMADAMENTE 0,5mL DE SOLUÇÃO COM 30µM DE ANATOXINA-A EM METANOL/ÁGUA (9/91, V/V) COM 0,01% DE ÁCIDO ACÉTICO; CONCENTRAÇÃO: 4,96µg/mL; DEVERÁ SER FORNECIDO O CERTIFICADO DE ANÁLISE (MRC - MATERIAL DE REFERÊNCIA CERTIFICADO). REFERÊNCIA: NRC CANADÁ / EUROFINS ABRAXIS OU SIMILAR OU DE MELHOR QUALIDADE.			
05	1068130276	SOLUÇÃO PADRÃO DE MICROCISTINA LF	UN	2
PADRÃO DE MICROCISTINA LF SEM CERTIFICADO (MICROCYSTIN LF STANDARD, NO CERTIFIED); CONCENTRAÇÃO: 10 μ G/mL; EM METANOL; EMBALAGEM: ÂMPOLA DE 1,0mL. REFERÊNCIA: EUROFINS ABRAXIS - PN 300646 OU SIMILAR OU DE MELHOR QUALIDADE.			
06	1068130277	SOLUÇÃO PADRÃO DE MICROCISTINA RR	UN	2
PADRÃO DE MICROCISTINA RR COM CERTIFICADO (MICROCYSTIN RR STANDARD - CERTIFIED); CONCENTRAÇÃO: 10 μ G/mL; EM METANOL; EMBALAGEM: ÂMPOLA DE 0,5mL. REFERÊNCIA: EUROFINS ABRAXIS - PN 300582 OU SIMILAR OU DE MELHOR QUALIDADE.			
07	1068130278	SOLUÇÃO PADRÃO DE MICROCISTINA YR	UN	2
PADRÃO DE MICROCISTINA YR SEM CERTIFICADO (MICROCYSTIN YR STANDARD, NO CERTIFIED); CONCENTRAÇÃO: 10 μ g/mL; EM METANOL; EMBALAGEM: ÂMPOLA DE 1,0mL. REFERÊNCIA: EUROFINS ABRAXIS - PN 300638 OU SIMILAR OU DE MELHOR QUALIDADE.			

Os itens 01 a 07 deverão ser fornecidos obrigatoriamente em dois lotes diferentes de fabricação devido ao processo de acreditação de laboratório a Norma ISO 17025 ao qual necessitamos de padrões de lotes diferentes para calibração e verificação da curva.

Referência: Norma DOQ-CGCRE-016-ORIENTAÇÃO PARA A SELEÇÃO E USO DE MATERIAIS DE REFERÊNCIA.

4. CRITÉRIO DE JULGAMENTO DA PROPOSTA

4.1. O julgamento das propostas considerará o preço da LICITANTE para o fornecimento dos consumíveis supracitados, sob o regime de menor preço global.

5. TIPO DE CONTRATAÇÃO E REGIME/FORMA DE EXECUÇÃO/FORNECIMENTO:

5.1. (__) SERVIÇO:

5.1.1. (__) de natureza contínua ou
(__) de escopo;

5.1.2. (__) com mão de obra alocada ou
(__) sem mão de obra alocada;

5.1.3. (__) regime de execução por preço unitário;
(__) Regime de execução por preço global; ou
(__) Regime de execução por tarefa.

5.2 (X) AQUISIÇÃO:

(X) Forma de fornecimento integral;
( ) Forma de fornecimento parcelada;
( ) Forma de fornecimento contínua.

6. PRAZO DE ENTREGA DO PRODUTO

6.1. A empresa contratada deverá entregar o material especificado em até 2 (meses) após a emissão da ordem de fornecimento a CEDAE.

6.2. A entrega deverá ser integral.

6.3. Ao ser identificada qualquer não conformidade com os itens, a CONTRATADA será obrigada a substituí-los sem ônus financeiro para a CEDAE, em um prazo máximo de 30 (trinta) dias. Em caso de reincidência de recusa, será caracterizado como descumprimento das obrigações contratuais, estando a CONTRATADA sujeita às penalidades previstas na Lei Federal de licitações vigente.

7. LOCAL DE ENTREGA

7.1. A entrega dos materiais deverão ser na antiga Estrada Rio-São Paulo, km 19,5 – Jardim Guandu – Nova Iguaçu – RJ – CEP: 26.298-420;

7.2. A entrega dos materiais obedecerá ao período das 08h00min às 16h00min, no local indicado, de segunda a sexta-feira, sob a responsabilidade da contratada;

7.3. A empresa contratada deverá agendar a entrega através do telefone (21) 2686-9952, com pelo menos 24 horas de antecedência;

7.4. Os materiais deverão ser transportados e descarregados pela empresa contratada sem custos para a CEDAE;

7.5. Os funcionários da empresa contratada/transportadora, no momento em que estiverem no interior das instalações da CEDAE, deverão se submeter às normas internas da Companhia.

8. CONDIÇÕES DE RECEBIMENTO

8.1. Todos os materiais fornecidos serão inspecionados quando da entrega, podendo independentemente de aceites anteriores, serem recusados, caso se verifique, no todo ou em parte do objeto, vícios, defeitos e incorreções, resultantes da fabricação ou transporte, constatados visualmente ou se necessário em laboratório.

8.2. Se a Comissão de Fiscalização recusar algum item de fornecimento, a Contratada deverá repô-lo às suas expensas. Em caso de recusa do material, o fornecedor será notificado e deverá promover a retirada e substituição do mesmo, no prazo estabelecido na notificação. Em caso de reincidência de recusa, será caracterizado como descumprimento das obrigações contratuais, estando sujeito às penalidades.

8.3. Os materiais só serão aceitos após a verificação, de acordo com o especificado no Edital de Licitações. A verificação deverá ser feita pelo responsável do Laboratório (Comissão de Fiscalização - CEDAE) e por um Técnico capacitado da empresa fornecedora. Esta verificação deverá ocorrer, preferencialmente, no ato da entrega.

8.4. Caberá a CEDAE o direito de recusar o material que esteja fora das especificações.

8.5. Em caso de recusa dos materiais, o fornecedor será notificado e deverá promover a retirada e substituição do mesmo, no prazo estabelecido na notificação. Em caso de reincidência de recusa, será caracterizado como descumprimento das obrigações contratuais, estando sujeito às penalidades previstas no contrato.

8.6. Todos os custos (estada, alimentação e transporte) serão de responsabilidade da empresa fornecedora.

8.7. O fornecedor mesmo não sendo o fabricante, responderá inteira e solidariamente pela qualidade e autenticidade destes, obrigando-se a substituir às suas expensas, no

todo ou em parte, o objeto da licitação;

8.8. O aceite dos materiais pela contratante, não exclui a responsabilidade civil por vícios de qualidade ou quantidade ou disparidade com as especificações técnicas exigidas no edital, ou atribuídas pelo fornecedor, verificados posteriormente;

9. PRAZO E CONDIÇÕES DE GARANTIA, MANUTENÇÃO E ASSISTÊNCIA TÉCNICA DO PRODUTO OU SERVIÇO

9.1. Condições de validade mínima: Cada lote do padrão deverá ser entregue restando, no mínimo, 6 meses da validade do produto na data de entrega;

9.2. Todos os materiais fornecidos serão inspecionados quando da entrega, podendo independentemente de aceites anteriores, serem recusados, caso se verifique, no todo ou em parte do objeto, vícios, defeitos e incorreções, resultantes da fabricação ou transporte, constatados visualmente ou se necessário em laboratório;

10. FORMA E CONDIÇÕES DE PAGAMENTO

10.1. O(s) pagamento(s) à contratada será(ão) realizado(s) no prazo máximo de até 30 (trinta) dias contados de cada recebimento provisório do produto pela Comissão de Fiscalização.

11. OBRIGAÇÕES DA CONTRATADA

11.1. Atender todas as regras deste Termo de Referência bem como as Cláusulas do Contrato;

11.2. Em observância ao princípio do desenvolvimento sustentável, a contratada deve adotar práticas de sustentabilidade, nos termos dos Arts. 6º e 7º do Decreto Estadual do Rio de Janeiro n.º 43.629, de 5 de junho de 2012, que visem à:

11.2.1. Redução de consumo de água, energia ou combustível;

11.2.2. Redução na geração de resíduos e destinação final ambientalmente adequada dos que forem gerados; ou Redução da emissão de gases efeito estufa.

11.3. Prestar os esclarecimentos que forem solicitados pela CEDAE, cujas objeções se obriga a atender prontamente, bem como dar ciência aos mesmos, imediatamente e por escrito, de qualquer anormalidade que verificar quando da execução do objeto deste Termo de Referência.

11.4. A fiscalização poderá realizar todas e quaisquer verificações, obrigando-se a CONTRATADA a fornecer todos os detalhes e informações necessárias.

11.5. O licitante vencedor deverá encaminhar o catálogo detalhado dos materiais oferecidos, que será avaliado pela comissão de fiscalização e dará o parecer para prosseguimento da licitação.

11.6. Os materiais serão inspecionados quando da entrega e serão comparados com as especificações do edital, podendo ser recusados, caso se verifique, no todo ou em parte, vícios, defeitos e incorreções resultantes da fabricação ou transporte, constatado visualmente ou em laboratório.

11.7. A CEDAE reserva-se o direito de recusar o produto que esteja fora das especificações, no todo ou em parte, devendo a CONTRATADA promover às suas expensas, as correções que se fizerem necessárias, quando constatados vícios, defeitos ou incorreções no cumprimento do contrato.

11.8. Em caso de recusa do material, a CONTRATADA será notificada e deverá promover a retirada e substituição dele, no prazo estabelecido na notificação, às suas expensas. Em caso de reincidência de recusa, o fato irá caracterizar descumprimento das obrigações contratuais, estando o fornecedor sujeito às penalidades previstas no contrato.

11.9. O fornecedor, mesmo não sendo o fabricante, responderá inteira e solidariamente pela qualidade e autenticidade dos consumíveis, obrigando-se a substituir às suas expensas, no todo ou em parte, o objeto da licitação. O aceite dos itens pela contratante não exclui a responsabilidade civil por vícios de qualidade ou quantidade ou disparidade com as especificações técnicas exigidas no edital, ou atribuídas pelo fornecedor, verificados posteriormente.

12. AMOSTRA

Não se aplica.

13. VISITA TÉCNICA

Não se aplica.

14. ACORDO DE NÍVEL DE SERVIÇO - ANS

Não se aplica.

15. FORMALIZAÇÃO DO CONTRATO

15.1. Para a referida contratação, haverá emissão de contrato.

16. CONDIÇÕES GERAIS

16.1. A contratada deverá se reportar à Comissão de Fiscalização do Contrato para elucidar eventuais dúvidas sobre quaisquer dos tópicos acima.

17. ASSINATURAS

Robson Campos dos Santos Junior
Chefe de Coordenação – GGL-6.2
Matrícula: 0-019194-1

Wellis Rodrigo da Silva Costa
Gerente – GGL
Matrícula: 0-018698-4

ÁCIDO FLUOSSILÍCICO - PROCESSO E-17100.208/2016

CRONOGRAMA FISICO-FINANCEIRO

Item		Localidade			dez/16	jan/17	fev/17	mar/17	abr/17	mai/17	jun/17	jul/17	ago/17	set/17	out/17	nov/17	
					1º	2º	3º	4º	5º	6º	7º	8º	9º	10º	11º	12º	total
1	ÁCIDO FLUOSSILÍCICO	ETA GUANDU	0,73	quant.	390.000	390.000	390.000	390.000	390.000	390.000	390.000	390.000	390.000	390.000	390.000	390.000	4.680.000
				R$	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	284.700,00	3.416.400,00
1	ÁCIDO FLUOSSILÍCICO	ETA LARANJAL	0,95	quant.	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	660.000
				R$	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	52.250,00	627.000,00
2	ÁCIDO FLUOSSILÍCICO	UT TÚNEL IV	1,02	quant.	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	720.000
				R$	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	61.200,00	734.400,00
3	ÁCIDO FLUOSSILÍCICO	UT BATALHA	1,40	quant.	13.000	13.000		-	13.000		-	-	13.000		-	-	52.000
				R$	18.200,00	18.200,00	-	-	18.200,00	-	-	-	18.200,00	-	-	-	72.800,00
4	ÁCIDO FLUOSSILÍCICO	UR ENGENHO DE DENTRO	1,40	quant.		13.000		-		-	13.000		-		-	13.000	39.000
				R$	-	18.200,00	-	-	-	-	18.200,00	-	-	-	-	18.200,00	54.600,00
6	ÁCIDO FLUOSSILÍCICO	ETA MACAÉ	1,40	quant.		23.000		-	23.000		-	23.000		-	23.000		92.000
				R$	-	32.200,00	-	-	32.200,00	-	-	32.200,00	-	-	32.200,00	-	128.800,00
7	ÁCIDO FLUOSSILÍCICO	ETA ITAPERUNA	1,40	quant.	-	23.000		-	-	23.000		-	-	-	23.000		69.000
				R$	-	32.200,00	-	-	-	32.200,00	-	-	-	-	32.200,00	-	96.600,00
		TOTAL			518.000	577.000	505.000	505.000	541.000	528.000	518.000	528.000	518.000	505.000	551.000	518.000	6.312.000
					416.350,00	498.950,00	398.150,00	398.150,00	448.550,00	430.350,00	416.350,00	430.350,00	416.350,00	398.150,00	462.550,00	416.350,00	5.130.600,00

2016	**518.000**
	416.350,00

2017	**5.794.000**
	4.714.250,00

6.312.000
5.130.600,00

dF Tecno-Científica

ANEXO IV

CARTA PROPOSTA DE PREÇOS

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023 – DAD-3

OBJETO: "AQUISIÇÃO DE PADRÕES DE CIANOTOXINAS EM ÁGUA".

RAZÃO SOCIAL DA PROPONENTE: DF Tecno-Científica Ltda.-EPP
CNPJ: 10.476.350/0001-82
ENDEREÇO: Rua Vasomiro Malaquias de Barros nº 67, CEP: 12231-642 (SALAS: 22/23)
Jardim Satélite – São José dos Campos -SP
TEL.: (12) 3933-2369/ (12)3933-6811 FAX: -
E-MAIL: df@dftecnocientifica.com.br / bianca@dftecnocientifica.com.br

TOTAL GERAL DA PROPOSTA R$101.108,00 (Cento e um mil e cento e oito reais)

OBS.: Possuímos profissional capacitado para prestar assistência técnica, responsável: Químico Wilson Alves Colvara registrado no CRQ IV sob n° 05101376.

PRAZO PARA FORNECIMENTO: 02 (dois) meses.

CONDIÇÕES DE PAGAMENTO: Conforme estabelece a cláusula sexta da minuta do contrato, Anexo VI do Edital.

VALIDADE DA PROPOSTA: 60 (sessenta) dias da sessão pública de lances.

A Empresa, por intermédio de seu representante legal abaixo identificado, declara, sob as penalidades da lei, para fins de participação no Pregão Eletrônico nº 0021/2023, que:

• Responsabiliza-se pelas transações efetuadas em seu nome, assumindo como firmes e verdadeiras suas propostas e lances, inclusive os atos praticados diretamente ou por seu representante, não cabendo à CEDAE responsabilidade por eventuais danos decorrentes de uso indevido da senha, ainda que por terceiros.

• Os materiais ofertados atendem integralmente às especificações e condições do presente edital.

Obs.2: Anexo às propostas de preços, previstas no item 10.1, as empresas deverão apresentar no sistema eletrônico:

• Declaração informando que se enquadram ou na condição de microempresa ou empresa de pequeno porte, na definição da Lei Complementar nº 123/2006 (vide Modelos das Declarações - anexo V do Edital).

• Declaração de Elaboração Independente de Proposta (vide Modelo – Anexo VII do Edital).

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Dados: 2023.06.02 13:53:18 -03'00'

Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

dF Tecno-Científica

PLANILHA DE CUSTOS UNITÁRIOS

LOTE ÚNICO					
ITENS	QUANT.	UNID.	DESCRIÇÃO	PREÇO UNITÁRIO (R$)	PREÇO TOTAL (R$)
01	02	UN	**Padrão de Microcistina LR** **Descrição:** CRM-MCLR é uma solução de calibração certificada para a determinação de microcistina - LR. Cada ampola contém ~ 0,5 mL de solução MCLR dissolvido em metanol aquoso (1: 1 v / v) a uma concentração de 10,2 µmol por litro (~10,15 µg/mL ou ~11 µg/g). - Acompanha Certificado de Análise (MRC) **Modelo/ Código:** CRM-MCLR **Marca:** NRC Canadá **Fabricante:** National Research Council Canada **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
02	02	UN	**Padrão de Saxitoxina** **Descrição:** CRM-STX-g é uma solução de calibração certificada de STX, 61.4 ± 2.4 µmol/L em ácido clorídrico aquoso 0,5 mM (~18.379 µg/L). Cada ampola contém ~ 0,5 mL de solução. - Acompanha Certificado de Análise (MRC) **Modelo/ Código:** CRM-STX **Marca:** NRC Canadá **Fabricante:** National Research Council Canada **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
03	02	UN	**Padrão Cilindrospermopsina** **Descrição**: CRM-CYN é uma solução de calibração certificada para a determinação de cilindrospermopsina (CYN) por métodos de análise química. Cada ampola contém ~ 0,5 mL de solução com 30 µM (~12,46 µg/mL ou ~12,7 µg/g) de cilindrospermopsina em água filtrada e desionizada. - Acompanha Certificado de Análise (MRC)	R$ 7.222,00	R$ 14.444,00

			Modelo/ Código: CRM-CYN **Marca:** NRC Canadá **Fabricante:** National Research Council Canada **Procedência:** Importado/USA		
04	02	UN	**Padrão Anatoxina-a** **Descrição**: CRM-ATX é uma solução de calibração certificada para a determinação de anatoxina-a (ATX-a) por métodos de análise química. Cada ampola contém ~ 0,5 mL de solução com 30 µM (~4,96 µg/mL ou ~5,03 µg/g) de anatoxina-a em metanol/água (9/91, v/v) com 0,01% de ácido acético. - Acompanha Certificado de Análise (MRC) **Modelo/ Código:** CRM-ATX **Marca:** NRC Canadá **Fabricante:** National Research Council Canada **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
05	02	UN	**Padrão de Microcistina LF** **Descrição:** Frasco com 1,0mL. Concentração 10µg/ml, em metanol. **Modelo/ Código:** PN300646 **Marca:** Abraxis **Fabricante:** Abraxis **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00
06	02	UN	**Padrão de Microcistina RR** **Descrição:** Frasco com 0,5mL. Concentração 10µg/ml, em metanol. **Modelo/ Código:** PN300582 **Marca:** Abraxis **Fabricante:** Abraxis **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00

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07	02	UN	**Padrão de Microcistina YR** **Descrição:** Frasco com 1,0mL. Concentração 10µg/ml, em metanol. **Modelo/ Código:** PN300638 **Marca:** Abraxis **Fabricante:** Abraxis **Procedência:** Importado/USA	R$ 7.222,00	R$ 14.444,00

VALOR TOTAL GERAL: R$ 101.108,00 (Cento e um mil e cento e oito reais)

São José dos Campos, 01 de junho de 2023.

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Dados: 2023.06.02 13:53:59 -03'00'

Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

Certificate of Analysis

NRC·CNRC Certified Reference Material

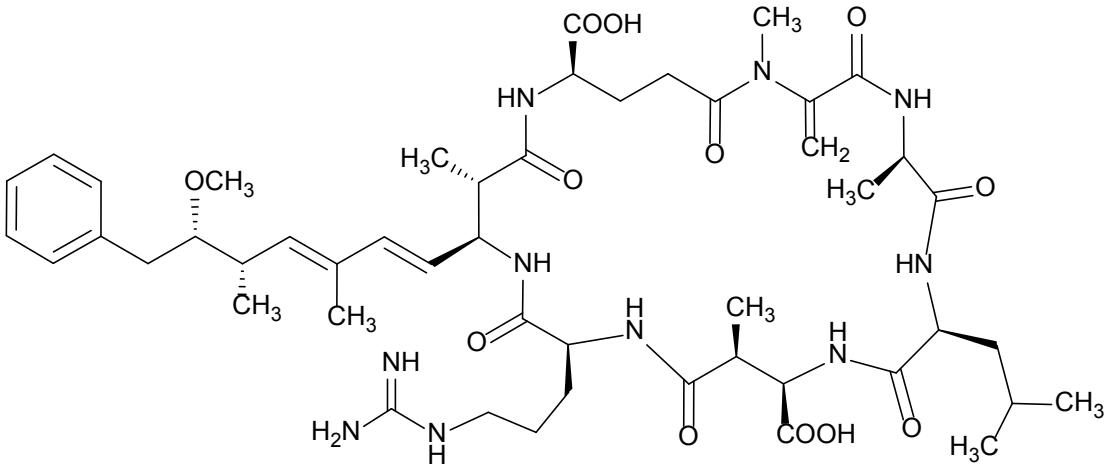
CRM-MCLR (Lot# 20070131)

Certified Calibration Solution for Microcystin-LR

Microcystin-LR (MCLR) is a cyclic peptide toxin produced by freshwater cyanobacteria [1]. Microcystins have been associated with domestic and wild animal poisonings and pose a threat to human health through contamination of drinking water supplies. CRM-MCLR is a certified instrument calibration solution prepared to aid the analyst in the determination of microcystin-LR. Each ampoule contains approximately 0.5 mL of a solution of the toxin dissolved in aqueous methanol (1:1, v/v) at a concentration suitable for calibration of liquid chromatography experiments.

Table 1: Certified concentration values for microcystin-LR in CRM-MCLR.

Compound	µmol/L (at +20 °C)	µg/mL (at +20 °C)	µg/g
Microcystin-LR	10.2 ± 0.4	10.1 ± 0.4	11.0 ± 0.4



Microcystin-LR
CAS registry no: 101043-37-2
Molecular formula: $C_{49}H_{74}N_{10}O_{12}$
Molecular weight: 995.2 g/mol
$[M+H]^+$: *m/z* 995.5560

Expiry date: 1 year from date of sale.
Storage conditions: freezer (-12 °C or lower)

Intended Use

CRM-MCLR is a calibration solution CRM designed for analytical method development and accurate quantitation of microcystin-LR. The concentration of toxin in this CRM is suitable for preparing a dilution series for calibration of instrumentation, such as liquid chromatography with detection by ultraviolet absorbance (LC-UVD) or mass spectrometry (LC-MS).

Preparation of the CRM-MCLR

Microcystin-LR was obtained from Åbo Akademi University (Turku, Finland). The *Microcystis sp. (*PCC 7820) strain used for isolation was obtained from The Pasteur Culture Collection of Cyanobacteria (http://cyanobacteria.web.pasteur.fr). The toxin was extracted from the *Microcystis sp.* culture, purified by chromatography and dried *in vacuo*. A portion of the pure toxin was dissolved in 50% CD_3OH/H_2O to give a stock solution that was used in the CRM preparation. The CRM-MCLR solution was prepared in filtered (0.2 µm) and degassed methanol/water (1:1, v/v) and dispensed into amber ampoules pre-filled with argon, which were then immediately flame-sealed. Each ampoule contains approximately 0.5 mL of solution.

Structural Confirmation and Purity Assessment

The molecular structure of the microcystin-LR was confirmed by NMR spectroscopy, accurate mass measurement and tandem mass spectrometry (Figures 1-3). The purity of the microcystin-LR was checked using the following techniques: 500 MHz proton NMR spectroscopy, LC-UVD, LC-MS, LC with chemiluminescence nitrogen detection (LC-CLND) [2], and capillary electrophoresis (CE-UV). Low levels of two impurities, [D-Asp^3]-MCLR and a methyl ester of MCLR are present. The levels of impurities were estimated using LC-UVD with CRM-MCLR as the calibrant, assuming the same molar response (Table 2).

Table 2: Information values for other compounds present in CRM-MCLR at the time of packaging.

Compound	$[M+H]^+$, *m/z*	Concentration (µmol/L) (at +20 °C)
[D-Asp^3]-Microcystin-LR	*m/z* 981	0.02*
Microcystin-LR methyl ester	*m/z* 1009	0.23*

* These concentrations are not certified.

Homogeneity

As this CRM is a true solution, it is expected to be homogenous. To confirm this, the concentration of microcystin-LR in randomly selected ampoules representing 1.4% of those produced was measured by LC-UVD. Using an analysis of variance of the data, no heterogeneity could be detected.

Stability Study

Extensive studies have been conducted to determine the stability of this toxin under various conditions. Microcystin-LR is sensitive to oxygen and will also undergo gradual isomerization to the 6(Z)-Adda isomer [3] when exposed to light. A 15 month stability study was performed on CRM-MCLR at various temperatures (-80, -16, +4, +20 and +37 °C). No loss of toxin was detectable at +4 °C during the course of that study. Less than 2% degradation was observed at +20 °C after 2 months, which indicates good stability for shipment purposes. An 8% loss of material was observed at +37 °C after 2 months.

Certified Value

The certified value for CRM-MCLR, 10.2 ± 0.4 µmol/L (at +20 °C) (Table 1), is based on results obtained at the NRC using two independent analytical methods: quantitative nuclear magnetic resonance (qNMR) spectroscopy [4] and LC-CLND. Calibration of both of these techniques was performed using accurate caffeine solutions.

The results shown in this certificate are traceable to the SI standard through gravimetrically prepared standards of established purity. This product serves as a suitable reference material for laboratory quality assurance programs.

Uncertainty

The overall uncertainty estimate (U_{CRM}) for CRM-MCLR includes uncertainties associated with batch characterization (u_{char}), between-bottle variation (u_{hom}) and instability associated with long-term storage (u_{stab}) [5-6]. These components can be combined as:

$$U_{CRM} = k\sqrt{u_{char}^2 + u_{hom}^2 + u_{stab}^2}$$

where k is the coverage factor (generally 2 or 3).

Quantitative measurements by CLND and QNMR contributed the most significant uncertainties. When combined they resulted in a relative uncertainty for batch characterization (u_{char}) of 0.014. As this CRM is a true solution, u_{hom} was not significant, as solutions are inherently homogenous [7]. Nevertheless, tests on homogeneity were performed (see section Homogeneity), and the between-bottle variance was determined to be no greater than the measurement variance, resulting in a relative value of 0.0025 for u_{hom}. A long-term stability study was performed on this CRM (see section Stability Study) which showed no observable loss of material when stored under the recommended conditions. Microcystin-LR exhibits reasonable stability at room temperature in the event that a delay in shipment occurs. The uncertainty due to stability (u_{stab}) [8] was not significant with a relative value of 0.012. Applying a coverage factor of 2 resulted in a final relative standard uncertainty in the certified value of 0.038.

Storage Instructions

To ensure the stability of microcystin-LR, the CRM and all dilutions thereof should be stored in the dark in a freezer (preferably at -12°C or lower).

Expiry

If stored unopened at the recommended storage conditions (see Section Storage Instructions), the certified concentration of the CRM is valid for 1 year from the date of sale**.** Please refer to the label on the original packaging for the expiration date.

Instructions for Use

Prior to opening, each ampoule should be allowed to warm to room temperature and the contents should be thoroughly mixed. The ampoule should be inverted several times, then held upright, tapped to ensure that most of the solution drains to the bottom, and opened at the pre-scored mark. Once an ampoule has been opened, accurate aliquots should be removed with calibrated volumetric equipment and transferred to volumetric flasks or vials. An increase in concentration due to evaporation of solvent will occur if the solution is left opened for more than a few minutes. It is recommended that the CRM should not be evaporated to dryness because of the potential of losses on glass surfaces. Care must be taken to use

apparatus with glass surfaces to transfer and store the solutions as losses of microcystins can occur on plastic [9]. Also, final solutions should contain at least 25% methanol to ensure complete solubility of the analyte.

A useful procedure that ensures accurate dilutions involves using a balance to determine weights of the dispensed aliquot and the final diluted solution, assuming that methanol/water (1:1, v/v) is used as the diluent (the density of the CRM solution is 0.925 g/mL at +25 °C). *Note*: The volume of the solution is not certified. Only the concentration is certified.

Safety Instructions

Microcystins are known to be hepatotoxic and may also be genotoxic. Only qualified personnel should handle the solution and appropriate disposal methods should be used. Heavy gloves and eye protection should be used when opening the ampoule in the event the glass shatters. A material safety data sheet (MSDS) is available for CRM-MCLR.

References

1. Carmichael WW (1994) The toxins of cyanobacteria. *Sci Am* 270:78-86.
2. Quilliam MA et al., manuscript in preparation.
3. Tsuji K, Nalto S, Kondo F, Ishikawa N, Watanabe M, Suzuki M, Harada K (1994) Stability of microcystins from cyanobacteria: effect of light on decomposition and isomerisation. *Environ Sci Technol* 28:173-177.
4. Burton IW, Quilliam MA, Walter JA (2005) Quantitative ^{1}H NMR with external standards: use in preparation of calibration solutions for algal toxins and other natural products. *Anal Chem* 77:3123-3131.
5. Pauwels J, Lamberty A, Schimmel H (2000) Evaluation of uncertainty of reference materials. *Accred Qual Assur* 5:95-99.
6. Pauwels J, Lamberty A, Schimmel H (1998) The determination of the uncertainty of reference materials certified by laboratory intercomparison. *Accred Qual Assur* 3:180-184.
7. Ellison SLR, Burke S, Walker RF, Heydorn K, Mansson M, Pauwels J, Wegscheider W, te Nijenhuis B (2001). Uncertainty for reference materials certified by interlaboratory study: Recommendations of an international study group. *Accred Qual Assur* 6:274-277.
8. Guide to the Expression of Uncertainty in Measurement, ISBN 92-67-10188-9, 1st ed. ISO, Geneva, Switzerland (1993).
9. Hyenstrand P, Metcalf JS, Beattie KA, Codd GA (2001) Losses of the cyanobacterial toxin microcystin-LR from aqueous solution by adsorption during laboratory manipulations. *Toxicon* 39:589-594.

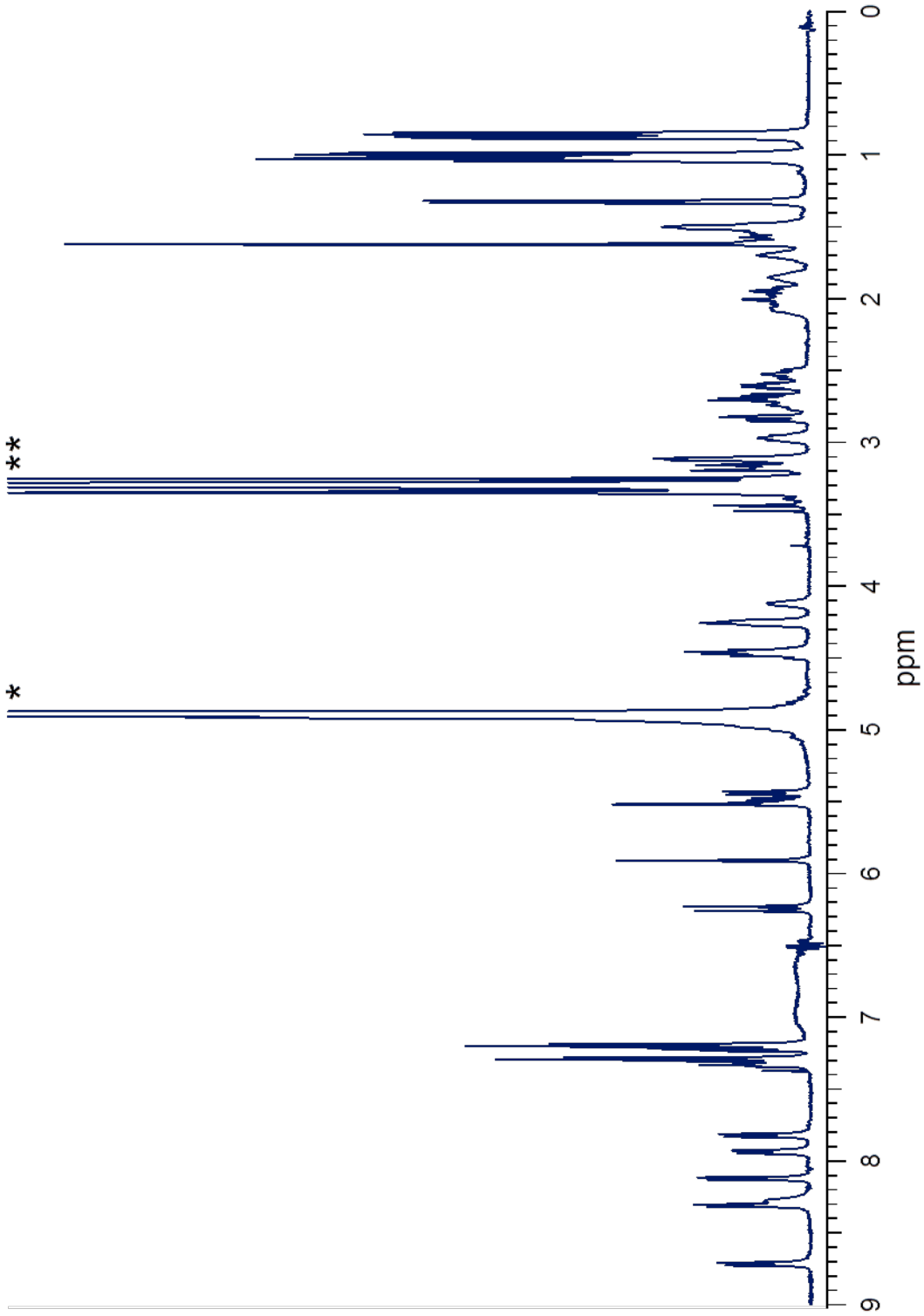


Figure 1: Proton NMR spectrum of microcystin-LR in water/CD_3OH. The truncated peaks represent the protons from water (*) and methanol (**).

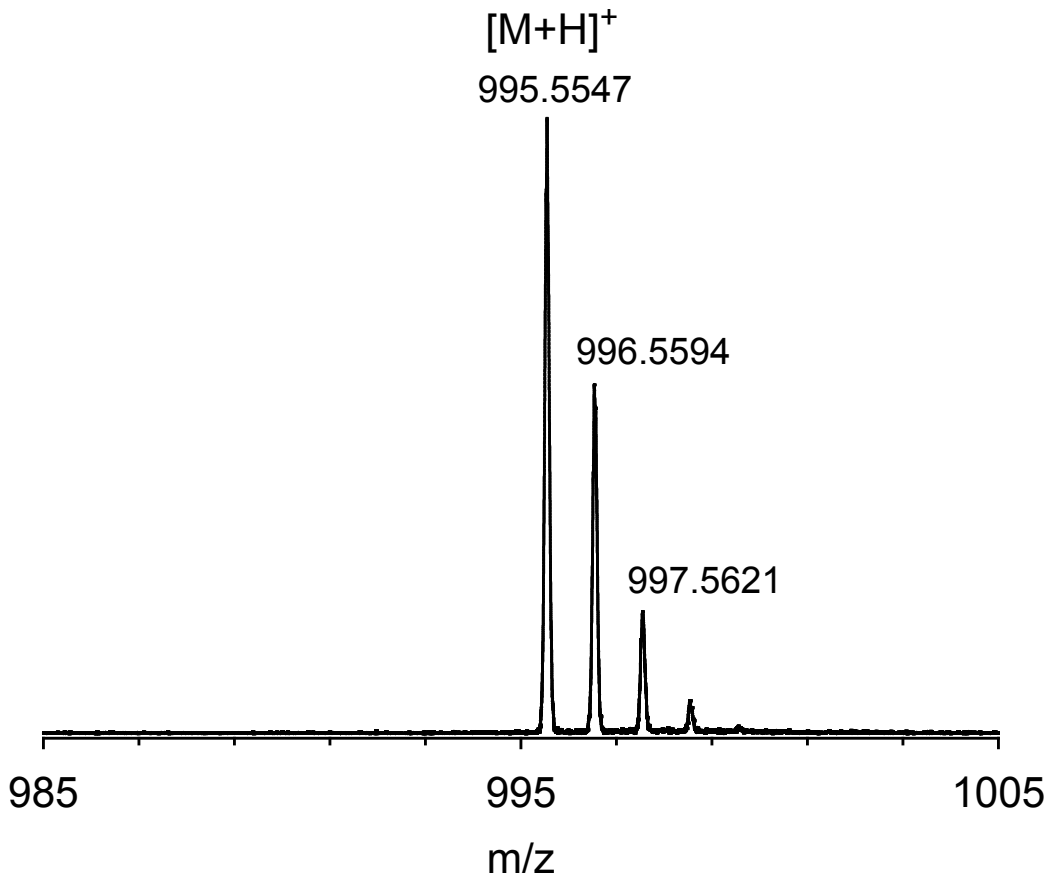


Figure 2: High resolution mass spectrum of microcystin-LR. CRM-MCLR was diluted in 50% CH_3CN/H_2O with 0.1% HCOOH and infused into a Waters QToF Premier mass spectrometer at 1 µL/min. Leucine enkephalin (556.2771 Da) was used as the lock-mass ion to correct for any short-term variability in calibration, and was infused into the mass spectrometer via a separate channel at 1 µL/min. The observed mass of the $[M+H]^+$ ion was 995.5547, which is in good agreement with the theoretical mass of 995.5560.

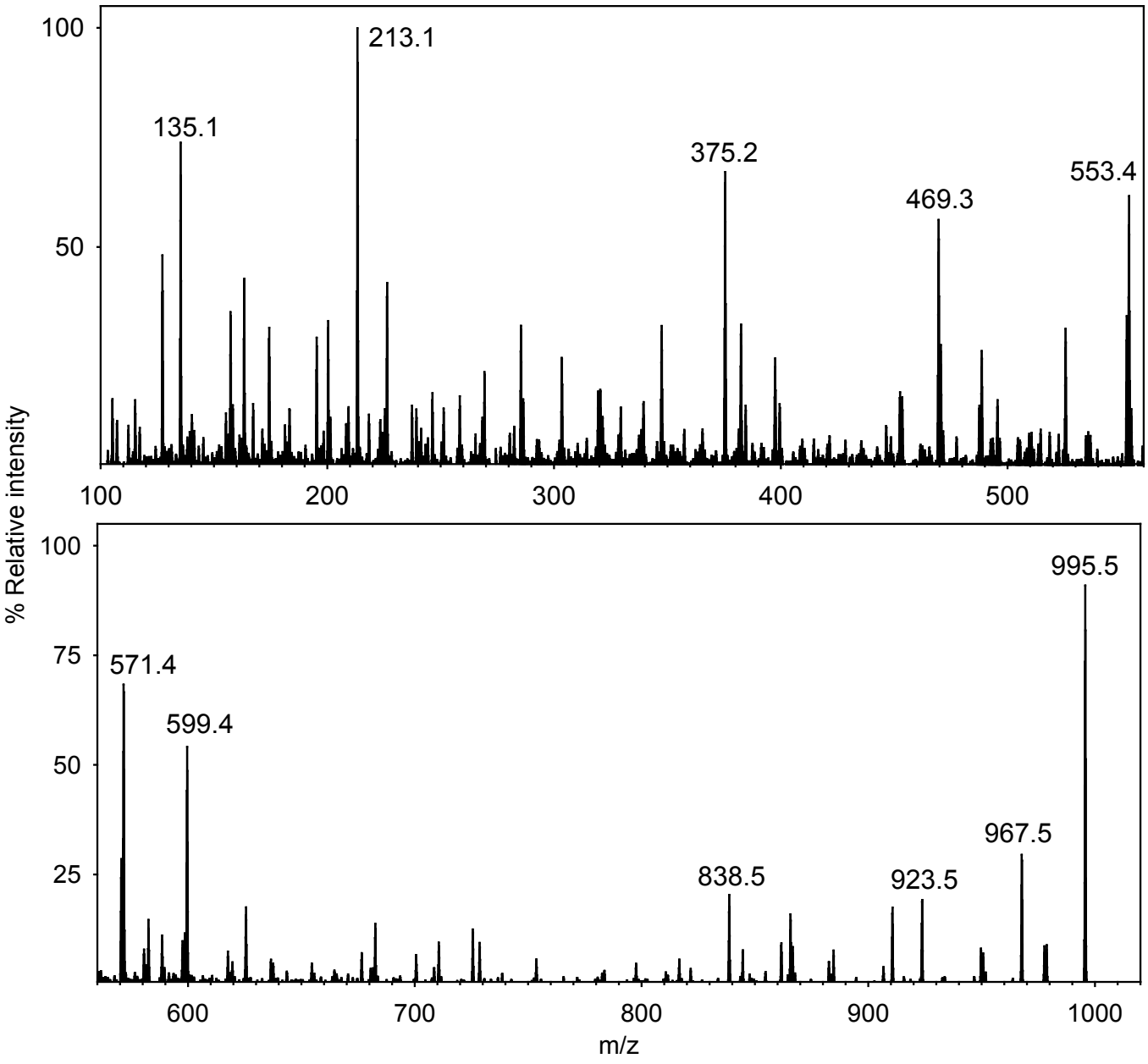


Figure 3: Product ion mass spectrum of the $[M+H]^+$ ion (*m/z* 995.5) of microcystin-LR generated from an LC-MS/MS analysis. Conditions: Agilent 1200 LC and AB-Sciex API4000 QTRAP MS with electrospray ionization; 75 V declustering potential; 75 V collision energy; Zorbax SB-C18, 1.8 µm, 50 mm × 2 mm i.d. column at +40 °C; 0.2 mL/min flow; gradient elution with 30% to 65% B over 5 min, where A = water, B = 95% acetonitrile, both with 2 mM ammonium formate and 50 mM formic acid.

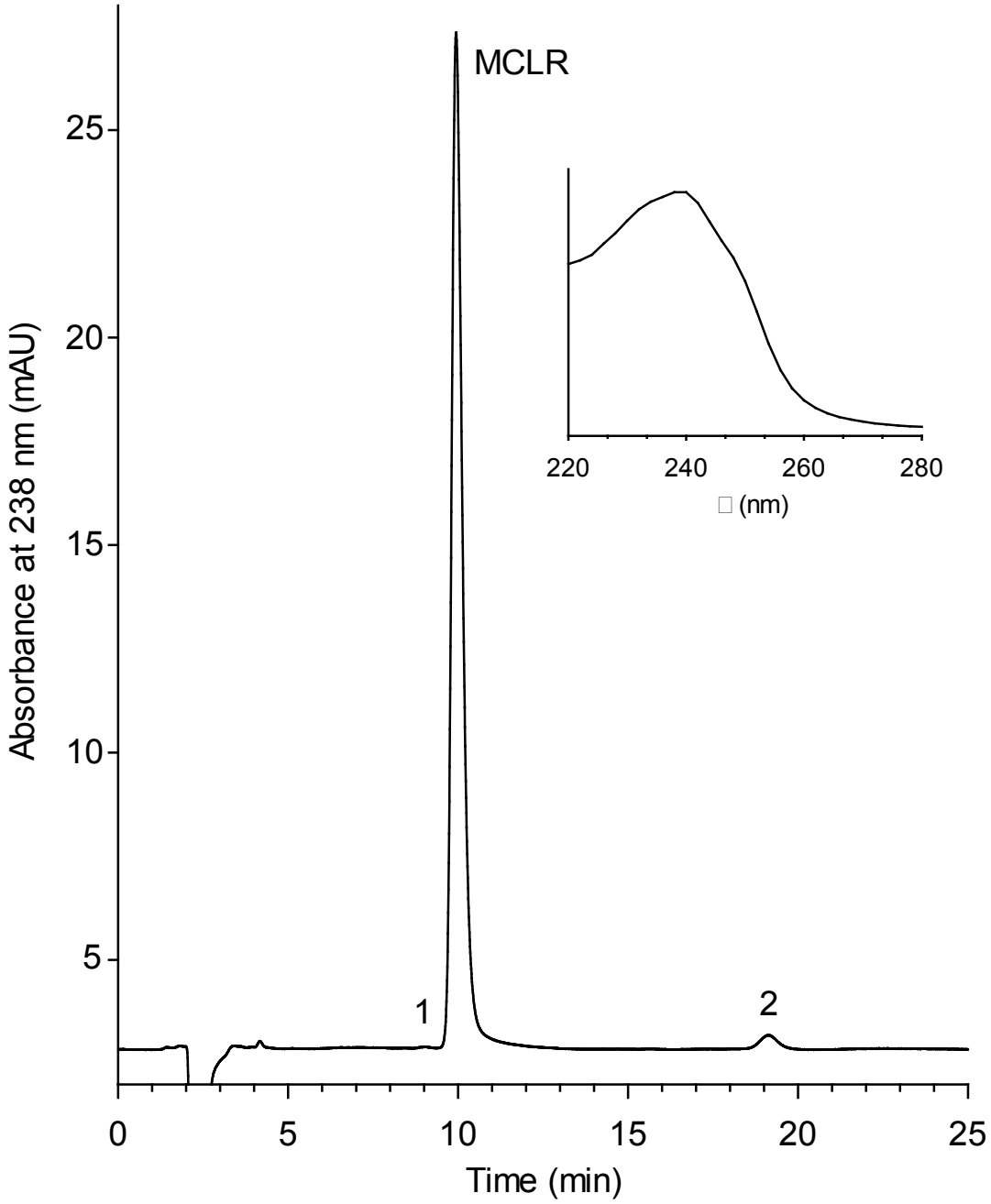


Figure 4: Analysis of CRM-MCLR by liquid chromatography with ultraviolet detection (LC-UVD). Conditions: Zorbax SB-C8, 2.1 × 150 mm column at +40 °C; isocratic analysis with CH_3OH/H_2O (47.5:52.5) with 0.2% HCOOH; 0.2 mL/min; 10 µL injection; UV detection at 238 nm. The UV spectrum was acquired using a diode array detector in a separate run. Peak 1 is [D-Asp^3]-MCLR; peak 2 is the MCLR methyl ester.

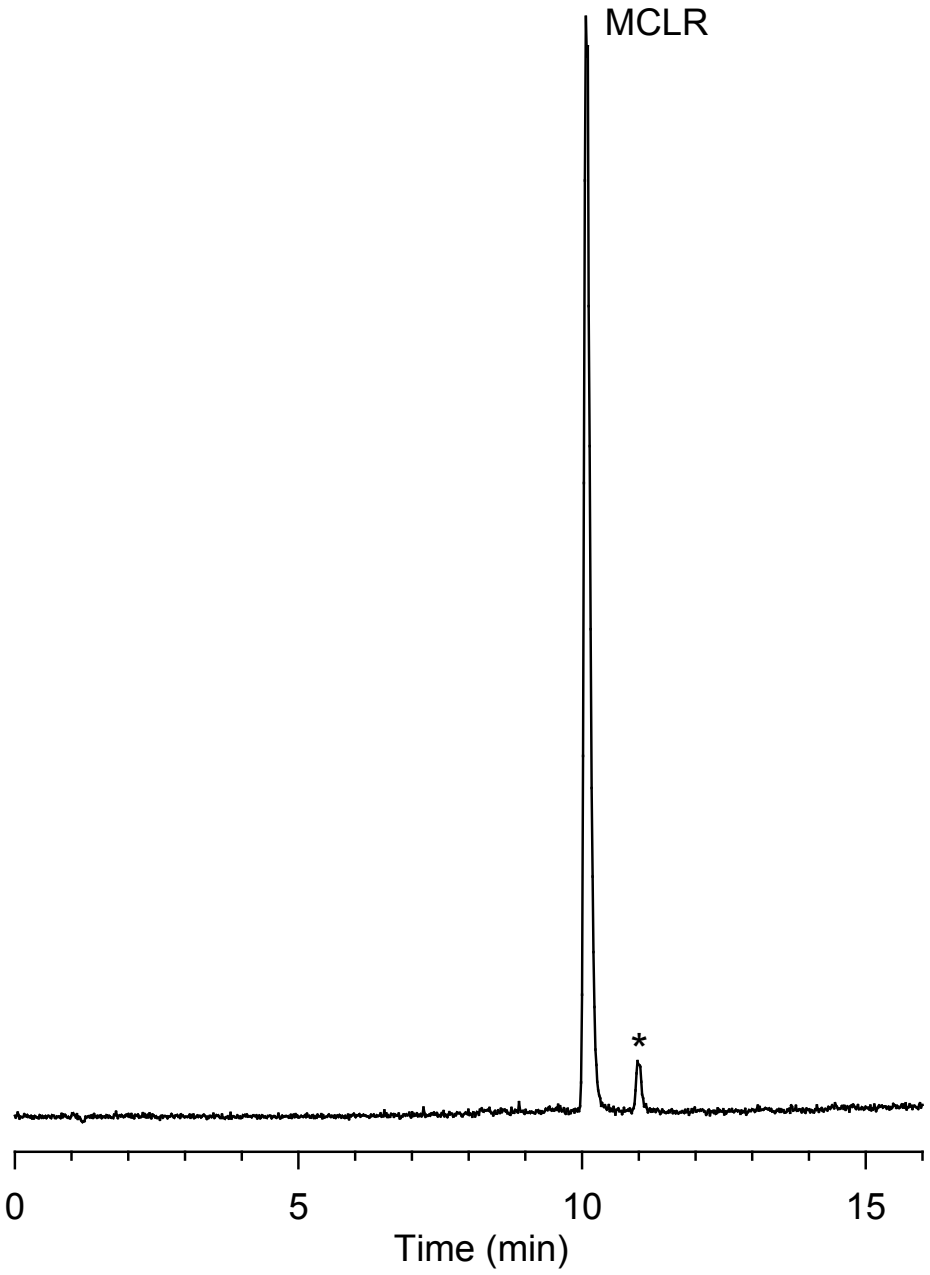


Figure 5: Analysis of a dilution of the CRM-MCLR stock solution by liquid chromatography with mass spectrometry detection (LC-MS). Conditions: Keystone BDS Hypersil C8, 2.1 × 50 mm column at +40 °C; gradient analysis with 20% to 80% B over 10 min (hold to 20 min) where A = H_2O; B = 95% CH_3CN/H_2O both with 50 mM HCOOH and 2 mM NH_4COOH; 0.2 mL/min flow. Full scan analysis using an AB-Sciex API165 single quadrupole mass spectrometer. The * indicates the MCLR methyl ester.

Acknowledgements

The following staff members of the Measurement Science and Standards portfolio at NRC contributed to the production and certification of CRM-MCLR: P. Blay, S. Crain, I. Burton, W. Hardstaff, D. Marciniak, J. Melanson, G. Pitcher, M. Quilliam, K. Reeves, K. Thomas, C. Trudeau and J. Walter.

The following staff members in the Department of Biochemistry and Pharmacy, Åbo Akademi University (Turku, Finland) contributed to the production and characterization of the microcystin-LR used in CRM-MCLR: L. Spoof and J. Meriluoto.

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The *Microcystis sp.* (PCC 7820) strain used for MCLR isolation is from the Pasteur Culture Collection of Cyanobacteria (http://cyanobacteria.web.pasteur.fr).

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K. Thomas, J. Meriluoto, L. Spoof, J. E. Melanson, K. Reeves, J. A. Walter and M. A. Quilliam. "CRM-MCLR, a certified calibration solution reference material for microcystin-LR", Biotoxin Metrology Technical Report CRM-MCLR-20070131, National Research Council Canada, Halifax, August, 2013.

First certification completed: May 2010
Document version: 20190416

Revised: April 2019 (source of culture clarified)

Accepted as a CRM, Halifax, September 2013

Signed: 

Michael A. Quilliam, Ph.D.
Group Leader, Biotoxin Metrology
Measurement Science and Standards

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Measurement Science and Standards
1411 Oxford Street
Halifax, Nova Scotia B3H 3Z1

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Fax: 1-902-426-5426
Email: CRM-MRCBiotoxin-Biotoxines@nrc-cnrc.gc.ca

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National Research Council Canada | Conseil national de recherches Canada

Certificate of Analysis

Certified Reference Material

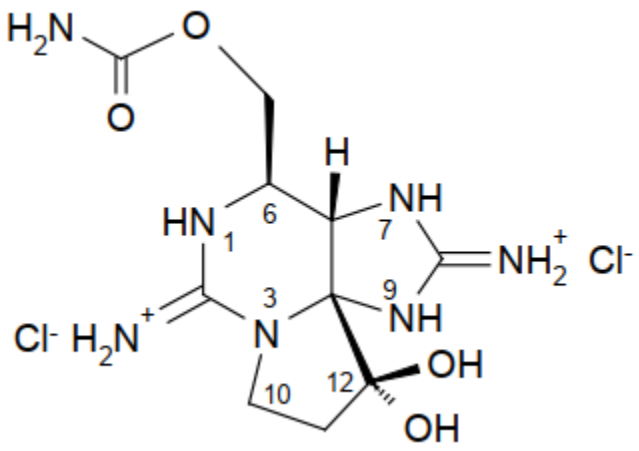
CRM-STX-g (Lot# 20201215)

Certified Calibration Solution for Saxitoxin Dihydrochloride

Saxitoxin (STX) [1] is found in both marine microalgae [2] and freshwater cyanobacteria [3]. CRM-STX-g is a certified calibration solution of STX in aqueous 0.5 mM hydrochloric acid, designed to aid in the identification and quantitation of STX. This is a replacement calibration solution for CRM-STX-f.

Table 1: Certified concentration and uncertainty for CRM-STX-g.

Compound	µmol/L (15 - 30 °C)
Saxitoxin (STX)	61.4 ± 2.4



Saxitoxin dihydrochloride
CAS registry No.: 35554-08-6
InChiKey: YHAHUGQQOBPXOZ-UIPPETONSA-N
Molecular formula: $C_{10}H_{19}N_7O_4Cl_2$
Molecular weight: 372.2 g/mol

Period of validity: 1 year from date of sale.
Storage conditions: +4 °C

Canada

Intended Use

CRM-STX-g is a certified calibration solution designed for analytical method development and accurate quantitation of STX. The concentration is suitable for preparing a dilution series for calibration of instruments such as liquid chromatography with detection by pre/post-column oxidation-fluorescence (LC-ox-FLD) or liquid chromatography-mass spectrometry (LC-MS), as well as for spiking control samples for recovery experiments.

Instructions for Storage and Use

To ensure the stability of CRM-STX-g, ampoules should be stored at +4 °C.

Prior to opening, each ampoule should be allowed to warm to room temperature and the contents thoroughly mixed. The ampoule should be opened at the pre-scored mark. Calibrated volumetric equipment should be used for accurate transfer of aliquots. An increase in concentration due to evaporation of solvent will occur if the solution is left opened for more than a few minutes. It is recommended that the CRM should not be evaporated to dryness because of the potential for losses. *Note:* The volume of the solution is not certified. Only the concentration is certified. Therefore, the entire contents of the ampoule should not simply be transferred to a volumetric flask and diluted to volume.

Preparation of CRM-STX-g

N-sulfocarbamoylgonyautoxin-3 (C2) was isolated from a large-scale laboratory culture of *Alexandrium tamarense,* chemically converted to STX, which was then purified by several chromatographic steps [4]. The structure and purity of STX was confirmed by LC-MS [5, 6] (Figures 1 and 2) and ^{1}H NMR. A measured accurate *m*/*z* of 300.1413 (Δ = -1 ppm for $C_{10}H_{18}N_7O_4^+$) was obtained for the $[M+H]^+$ ion of STX (free base) using LC-high resolution MS (LC-HRMS). Purity was further assessed by LC-ox-FLD [7] (Figure 3), capillary electrophoresis with UV (CE-UV) [8], and liquid chromatography with chemiluminescence nitrogen detection (LC-CLND) [9]. A trace level of decarbamoylsaxitoxin (dcSTX) is present in CRM-STX-g.

The stock solution was prepared by diluting the purified STX in 0.5 mM aqueous hydrochloric acid for quantitation using ^{1}H-NMR (qNMR) [10]. The CRM-STX-g solution was prepared by accurately diluting the stock solution in 0.5 mM aqueous hydrochloric acid. Aliquots were dispensed into clean argon-filled amber glass ampoules and immediately flame-sealed. Each ampoule contains approximately 0.5 mL.

Analytical Methods and Value Assignment

The certified value for CRM-STX-g (Table 1) is based on results obtained at the NRC using three analytical methods: qNMR using potassium hydrogen phthalate for calibration, LC-CLND using caffeine for calibration, and LC-MS/MS using CRM-STX-f for calibration.

Homogeneity

A representative number of CRM-STX-g ampoules were selected from across the fill series and STX response was measured by LC-ox-FLD. No heterogeneity was observed.

Stability

Stability studies have demonstrated good stability for STX in aqueous hydrochloric acid stored in sealed ampoules at temperatures of +4 °C and below.

Uncertainty

All reasonable sources of error related to the characterization of CRM-STX-g were considered and measured. The overall uncertainty estimate (U_{CRM}) includes uncertainties associated with batch characterization (u_{char}) and instability during storage (u_{stab}) [11-14]. These components are listed in Table 2, and are combined and expanded as follows:

$$U_{CRM} = k\sqrt{u_{char}^2 + u_{hom}^2 + u_{stab}^2}$$

where k is the coverage factor for a 95% confidence level (= 2).

Table 2: Uncertainty components for the certified value of CRM-STX-g.

Uncertainties	Relative*
u_{char}	0.020
u_{hom}	negligible
u_{stab}	0.002

*Relative to concentration shown in Table 1.

Safety Instructions

If sufficient quantities are ingested, STX and related toxins can cause paralysis and even death. Only qualified personnel should handle the solution and appropriate disposal methods should be used. Suitable personal protective equipment should be used when opening the ampoule in the event glass shatters. A safety data sheet (SDS) is available for CRM-STX-g.

Period of Validity

If stored unopened at the recommended storage condition of +4 °C, the certified concentration of CRM-STX-g is valid for 1 year from the date of sale**.** The label on the original packaging includes the period of validity.

Metrological Traceability

Results presented in this certificate are traceable to the SI (*Système international d'unités*) through gravimetrically prepared standards of a NIST potassium hydrogen phthalate certified reference material (SRM 84L), a NMIA caffeine certified reference material (M724c), and a NRC certified reference material for STX (CRM-STX-f, lot # 20110316).

Quality Management System (ISO 17034, ISO/IEC 17025)

This material was produced in compliance with the National Research Council of Canada (NRC) Metrology Quality Management System, which conforms to the requirements of ISO 17034 and ISO/IEC 17025.

The Metrology Quality Management System supporting the NRC Calibration and Measurement Capabilities, as listed in the *Bureau international des poids et mesures* (BIPM) Key Comparison Database (http://kcdb.bipm.org/), has been reviewed and approved under the authority of the Inter-American

Metrology System (SIM) and found to be in compliance with the expectations of the *Comité international des poids et mesures* (CIPM) Mutual Recognition Arrangement. The SIM approval is available upon request.

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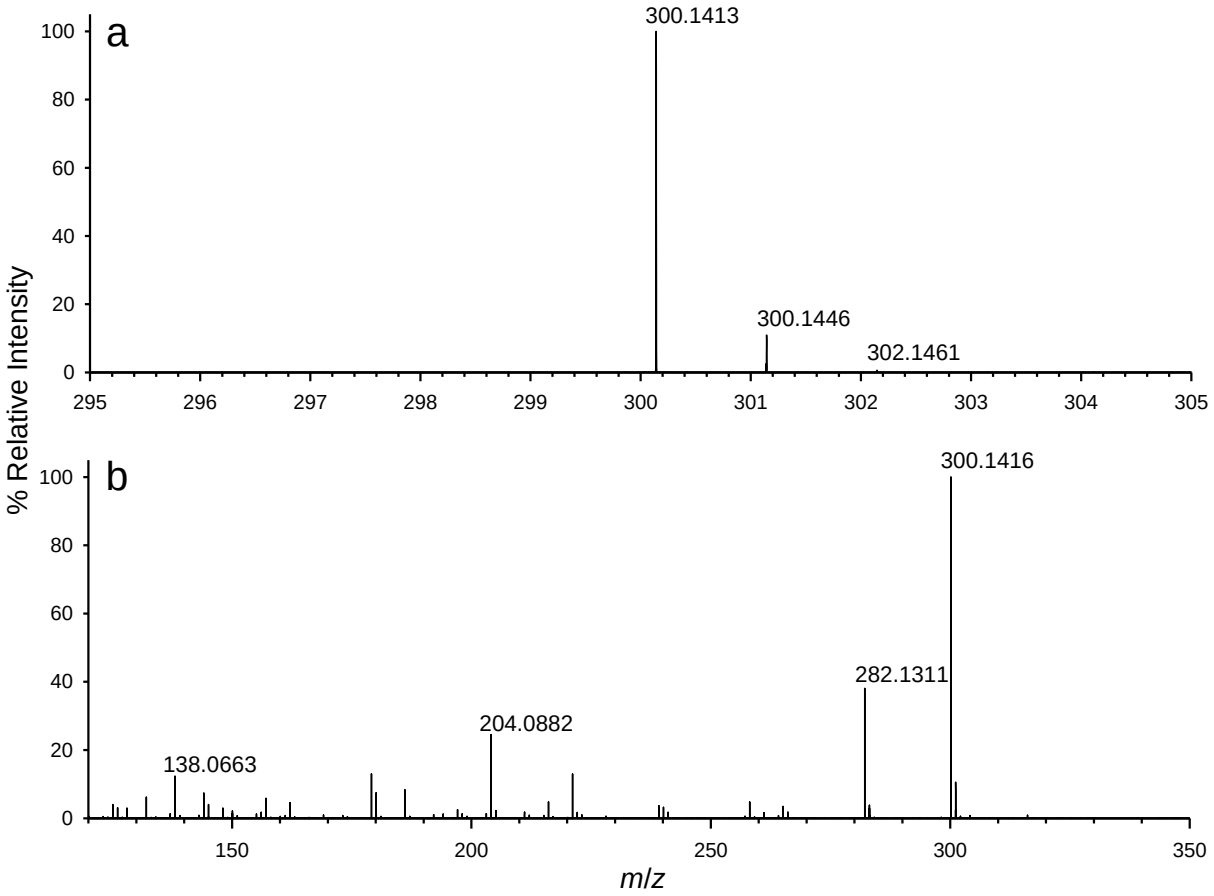

Figure 1: Full scan (a) and collision induced dissociation (b) (MS/MS) LC-HRMS spectra of STX used for CRM-STX-g analyzed on a Thermo Q Exactive-HF mass spectrometer equipped with a heated electrospray ionization probe. Data was collected in positive mode with a 2500 V spray voltage, +275 °C capillary temperature, and a +375 °C heater temperature. Full scan data was acquired with a resolution setting of 120 000. MS/MS data was acquired in parallel reaction monitoring scan mode with the same resolution setting and a normalized collision energy of 30 V.

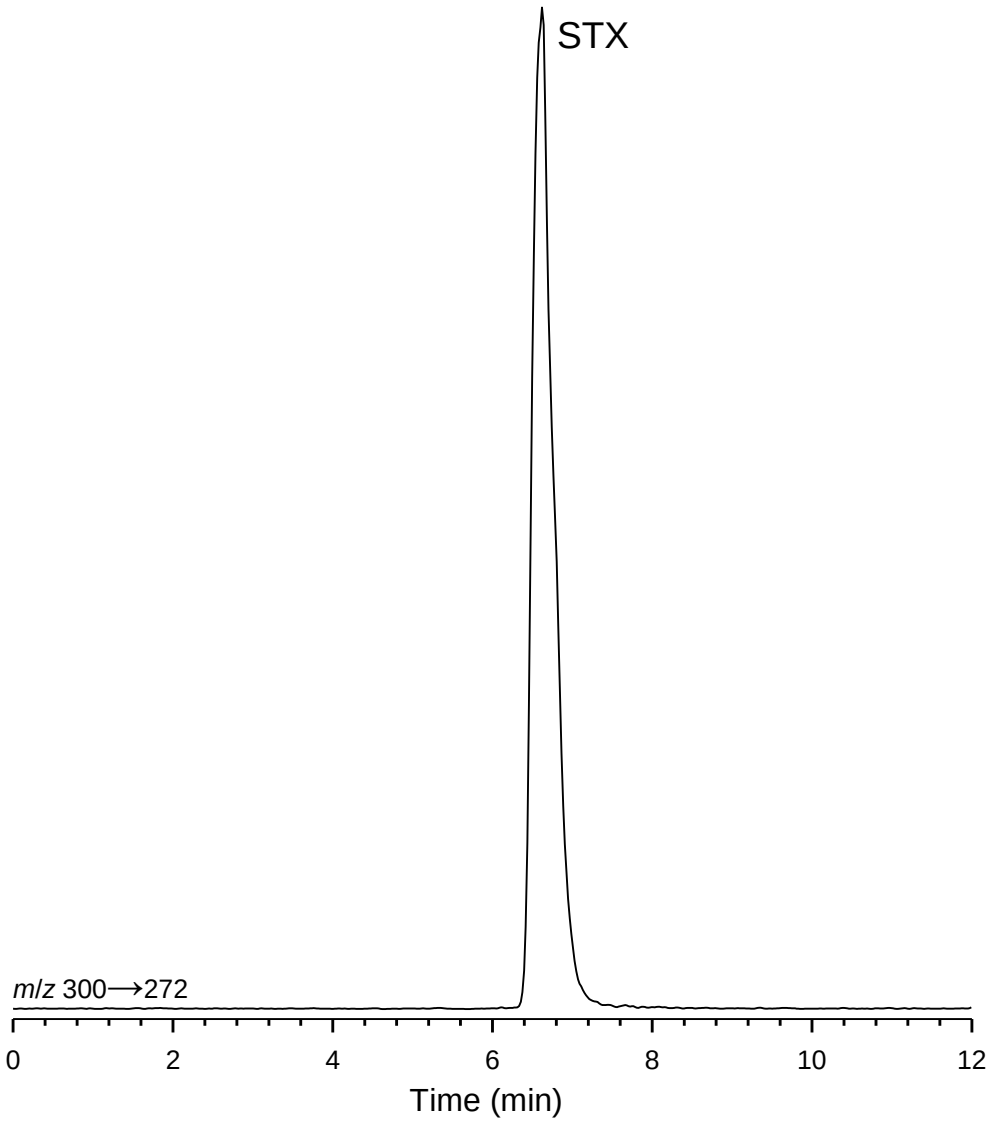

Figure 2: LC-MS/MS analysis of CRM-STX-g using selected reaction monitoring on an Agilent 1260 LC connected to a Sciex 4000 QTRAP with electrospray ionization. Chromatographic conditions: Toso-Haas Amide-80 column (250 mm × 2 mm, 5 µm) at +40 °C; mobile phase: 50% acetonitrile in water with 2 mM ammonium formate and 50 mM formic acid, 0.3 mL/min; injection volume: 5 µL. MS conditions: collision energy 25 V; declustering potential 40 V, and source temperature of +275 °C.

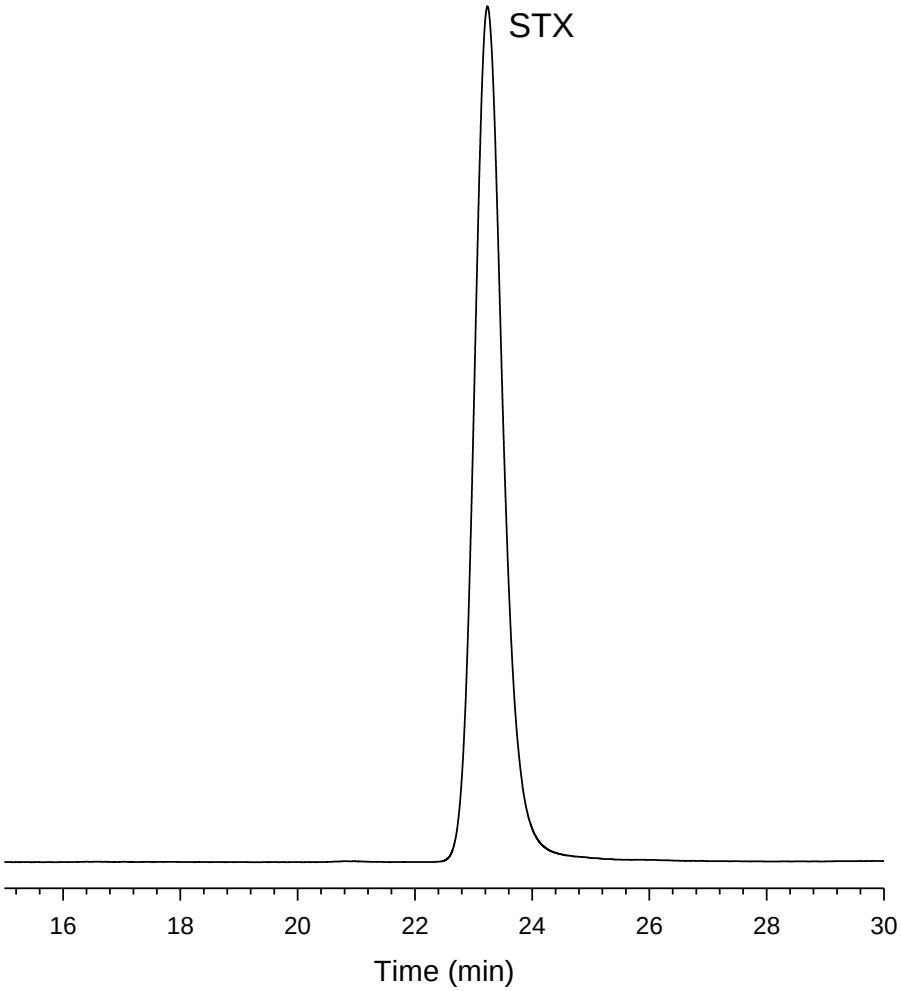

Figure 3: LC-ox-FLD analysis of CRM-STX-g. Conditions: Zorbax Bonus-RP column, 250 × 4.6 mm i.d. at +30 °C; mobile phase: water with 20 mM phosphoric acid, 8 mM heptane sulfonate, and 9% acetonitrile at pH 7.1, 0.8 mL/min; 10µL injection volume; post column oxidation with 0.4 mL/min 5 mM periodic acid, 100 mM phosphoric acid in water at pH 7.8; 1 mL reaction coil at +80 °C; effluent acidified with 0.4 mL/min 0.75 M nitric acid; fluorescence detection with excitation at 330 nm and emission at 390 nm.

Acknowledgements

The following staff members at the NRC contributed to the production and certification of CRM-STX-g: Beach DG, Crain S, Giddings SD, LeBlanc P, McCarron P, Miles CO, Mudge E, Perez Calderon RA, Rafuse C, Rajotte I, Reeves KL, Thomas K and Wright E.

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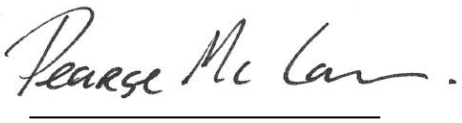
Approved by: 

Pearse McCarron, Ph.D.
Team Leader, Biotoxin Metrology

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National Research Council Canada
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Halifax, Nova Scotia B3H 3Z1
Canada

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Fax: 1-902-426-5426
Email: CRM-MRCHalifax@nrc-cnrc.gc.ca

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Certificate of Analysis

NRC·CNRC Certified Reference Material

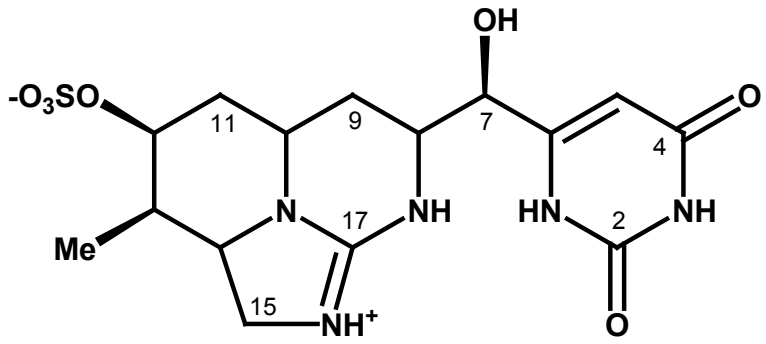
CRM-CYN (Lot# 20050531)

Certified Calibration Solution for Cylindrospermopsin

Cylindrospermopsin (CYN) is a cyanobacterial toxin associated with poisoning incidents [1]. CRM-CYN is a certified instrument calibration solution prepared to aid the analyst in the determination of CYN. Each ampoule contains approximately 0.5 mL of a solution of CYN dissolved in filtered, deionized water at a concentration suitable for calibration of liquid chromatography experiments and for spiking control samples in recovery experiments.

Table 1: Certified concentration values for CRM-CYN.

Compound	µmol/L (at +20 °C)	µg/mL (at +20 °C)	µg/g
CYN	30 ± 2	12.6 ± 0.8	12.7 ± 0.8



Cylindrospermopsin
CAS registry no: 143545-90-8
Molecular formula: $C_{15}H_{21}N_5O_7S$
Molecular weight: 415.42 g/mol
$[M+H]^+$: *m/z* 416.12345

Expiry date: 1 year from date of sale.
Storage conditions: +4 °C

Intended Use

CRM-CYN is a calibration solution CRM designed for analytical method development and accurate quantitation of CYN. The concentration of CYN in this CRM is suitable for preparing a dilution series for calibration of instrumentation, such as liquid chromatography with detection using ultraviolet absorbance (LC-UV) or mass spectrometry (LC-MS).

Preparation of the CRM-CYN

The starting material was a large-scale laboratory culture of the algae *Cylindrospermopsis raciborskii* [2,3]. The CYN was extracted, purified by preparative scale chromatography [4], dried under vacuum, and dissolved in deionized water to give a stock solution. The CRM-CYN solution was prepared in filtered (0.2 µm) and degassed deionized water and dispensed into amber ampoules pre-filled with argon, which were then immediately flame-sealed. Each ampoule contains approximately 0.5 mL of solution.

Structural Confirmation and Purity Assessment

The molecular structure of CYN was confirmed by NMR spectroscopy and tandem mass spectrometry. The NMR and product ion mass spectra are shown in Figures 1 and 2, respectively.

The purity of CRM-CYN was checked using the following techniques: 500 MHz proton NMR spectroscopy, LC-UV (Figure 3), LC-MS [5] (Figure 2), capillary electrophoresis with UV detection (CE-UVD) [6], and liquid chromatography with chemiluminescence nitrogen detection (LC-CLND) [7].

Homogeneity

As this CRM is a true solution, it is expected to be homogeneous. To confirm this, the concentration of CYN in randomly selected ampoules representing 1.2% of those produced was measured by LC-UV. The between-ampoule variation was measured to be no greater than the variation for replicate analyses of one solution, which demonstrates acceptable homogeneity over the entire ampoule range.

Stability Study

Stability studies have demonstrated excellent long-term stability of CYN solutions stored at +4 °C. Solutions are also stable when stored in a reliable, non-defrosting freezer (preferably ≤ -20 °C). It has further been determined that CRM-CYN solutions exhibit good stability at room temperature, with no detectable decomposition observed after twelve months.

Certified value

The certified value for CRM-CYN, 30 ± 2 µmol/L (at +20 °C) (Table 1), is based on results obtained at the NRC using two independent analytical methods: LC-CLND and quantitative NMR spectroscopy [8]. Calibrations of both LC-CLND and qNMR were performed using accurate solutions of USP-grade caffeine.

The results shown in this certificate are traceable to the SI standard through gravimetrically prepared standards of established purity. This product serves as a suitable reference material for laboratory quality assurance programs.

UV Molar Absorptivity Coefficient

Several different values for the molar absorptivity coefficient of CYN have been reported in the literature. Using CRM-CYN, the following absorbance data were measured:

Table 2: Molar absorptivity coefficient value for CYN.

λmax (nm)*	ε (M^{-1} cm^{-1})*
262	9800 ± 300

* Measurements made with water as solvent at pH 7 and +23 °C. Please note that different pHs can result in different values.

Uncertainty

The overall uncertainty estimate (U_{CRM}) for CRM-CYN includes uncertainties associated with batch characterization (u_{char}), between-bottle variation (u_{hom}), and instability associated with long-term storage (u_{stab}) [9,10]. These components can be combined as:

$$U_{CRM} = k\sqrt{\mu_{char}^2 + \mu_{hom}^2 + \mu_{stab}^2}$$

where *k* is the coverage factor (= 2).

All of these sources of uncertainty were considered for the estimate of the final uncertainty in the certified concentration of CRM-CYN [11,12]. Tests of homogeneity within and between ampoules were performed (see section Homogeneity) and were deemed to be negligible. Stability studies which extend past the specified shelf life of CRM-CYN have been completed and no significant loss of material was observed. CYN exhibits reasonable stability at room temperature (see Section Stability Study), in the event that a delay occurs during shipping. It follows that the relative contribution to uncertainty due to stability during storage (u_{stab}) was determined to be negligible.

All reasonable sources of error related to the characterization of CRM-CYN were considered and quantified. The certified value for the concentration of CYN is based on quantitative measurements by qNMR and LC-CLND, which together contribute a relative uncertainty of 0.030 (calculated from the standard uncertainty of the average of method means and the uncertainty of the calibrations). The relative uncertainty associated with the dilution of the stock to the final CRM solution is a negligible due to the use of gravimetric procedures. Applying a coverage factor of 2 resulted in a final relative standard uncertainty for the certified concentration of CYN in CRM-CYN of 0.061.

Storage Instructions

To ensure the long-term stability of CRM-CYN, the unopened ampoule should be stored in the dark in a refrigerator at approximately +4 °C. The toxin has been found to be stable under these conditions. Solutions are also stable when stored in a reliable, non-defrosting freezer (preferably ≤ -20 °C). The CRM has been prepared under conditions that minimize the chance of bacterial contamination, but it is recommended that aliquots and dilutions of the CRM be stored frozen (≤ -20 °C).

Expiry

If stored unopened at the recommended storage conditions (Section Storage Instructions), the certified concentration of the CRM is valid for 1 year from the date of sale**.** Please refer to the label on the original packaging for the expiration date.

Instructions for Use

Prior to opening, each ampoule should be allowed to warm to room temperature and the contents should be thoroughly mixed. The ampoule should be inverted several times, then held upright, tapped to ensure that the solution drains to the bottom, and opened at the pre-scored mark. Once an ampoule has been opened, accurate aliquots should be taken with calibrated volumetric equipment and transferred to volumetric flasks or vials. An increase in concentration due to evaporation of solvent will occur if the solution is left open for more than a few minutes. It is recommended that the CRM not be evaporated to dryness due to potential for losses on glass surfaces. A useful procedure that ensures accurate dilutions involves using a balance to determine weights of the dispensed aliquot and the final diluted solution, assuming that water is used as diluent. *Please Note*: The volume of the solution is not certified. Only the concentration is certified.

Safety Instructions

CYN irreversibly inhibits protein synthesis and may also be genotoxic [4,13]. Only qualified personnel should handle the solution and appropriate disposal methods should be used. Heavy gloves and eye protection should be used when opening the ampoule for protection should the glass shatter. A material safety data sheet (MSDS) is available for CRM-CYN.

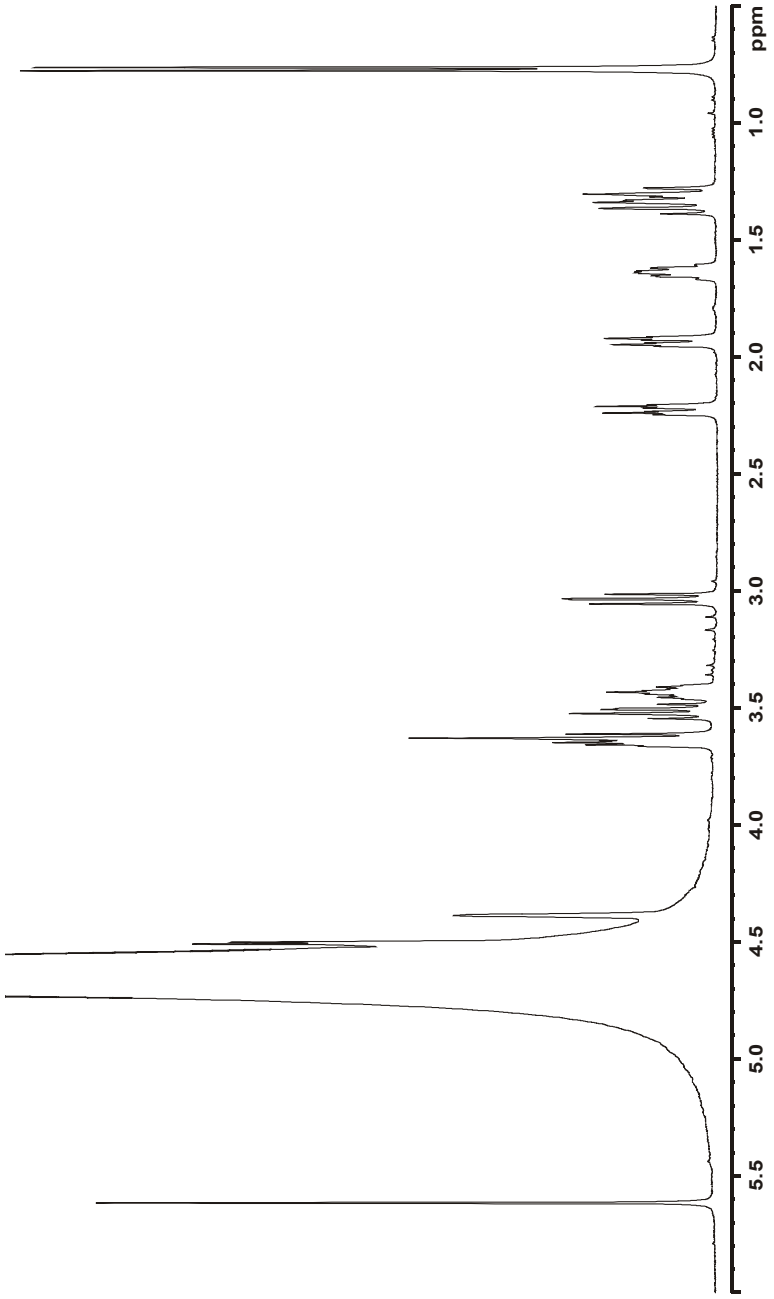


Figure 1: Proton NMR spectrum (500 MHz) of the stock solution of CYN (in H_2O) used for preparation of CRM-CYN.

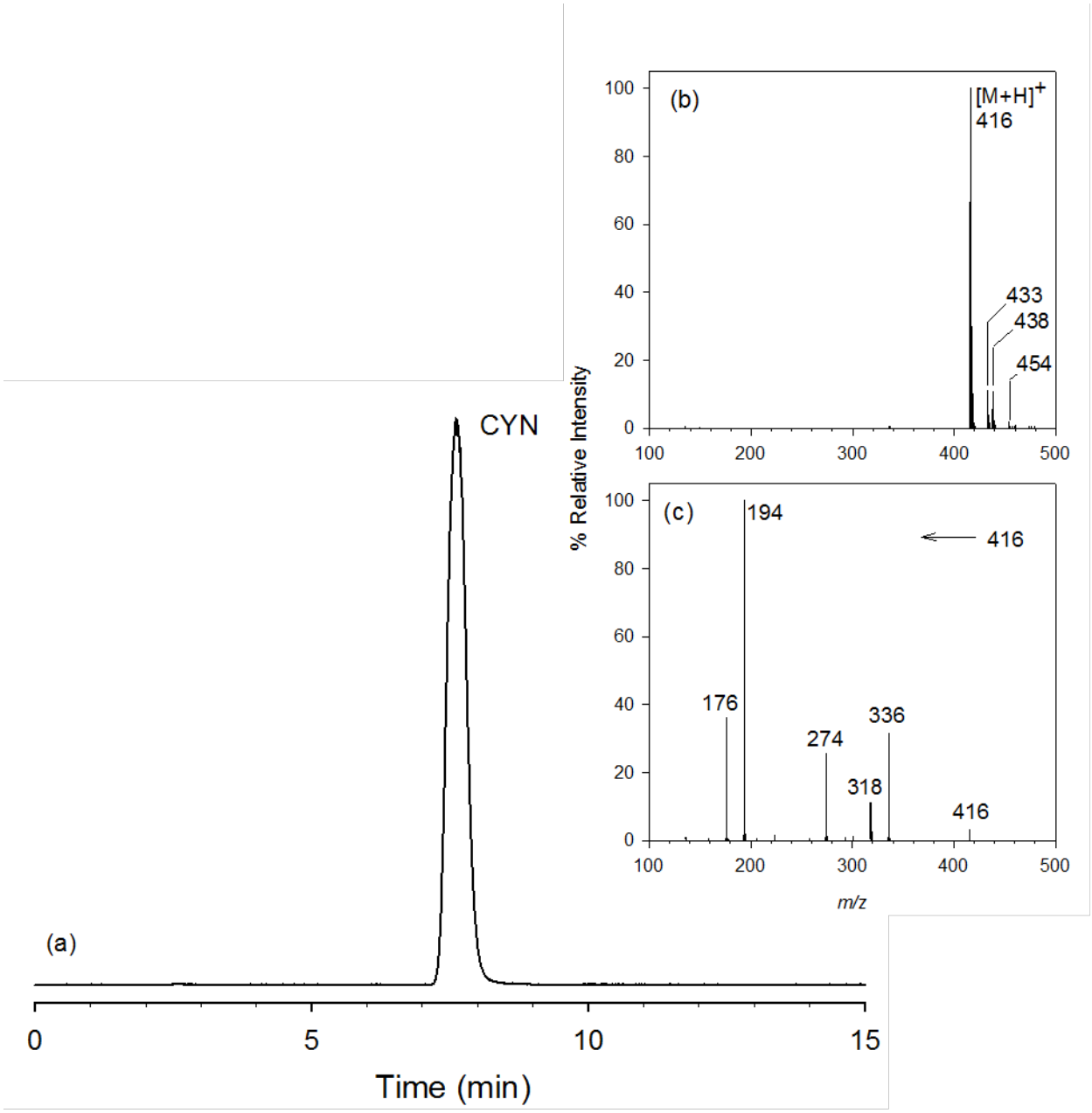


Figure 2: Analysis of the CRM-CYN by LC-MS. Conditions: column = TosoHaas TSKgel Amide-80, 2.1 × 250 mm at +30 °C; mobile phase = 71% CH_3CN/H_2O, 3.6 mM formic acid, 2 mM ammonium formate (isocratic); flow rate = 0.2 mL/min; 10 µL injected. (a) API-165 single quadrupole mass spectrometer, selected ion monitoring (*m/z* 416.4) with positive electrospray ionization, dwell = 150 msec; (b) electrospray mass spectrum; (c) product ion spectrum of *m/z* 416.

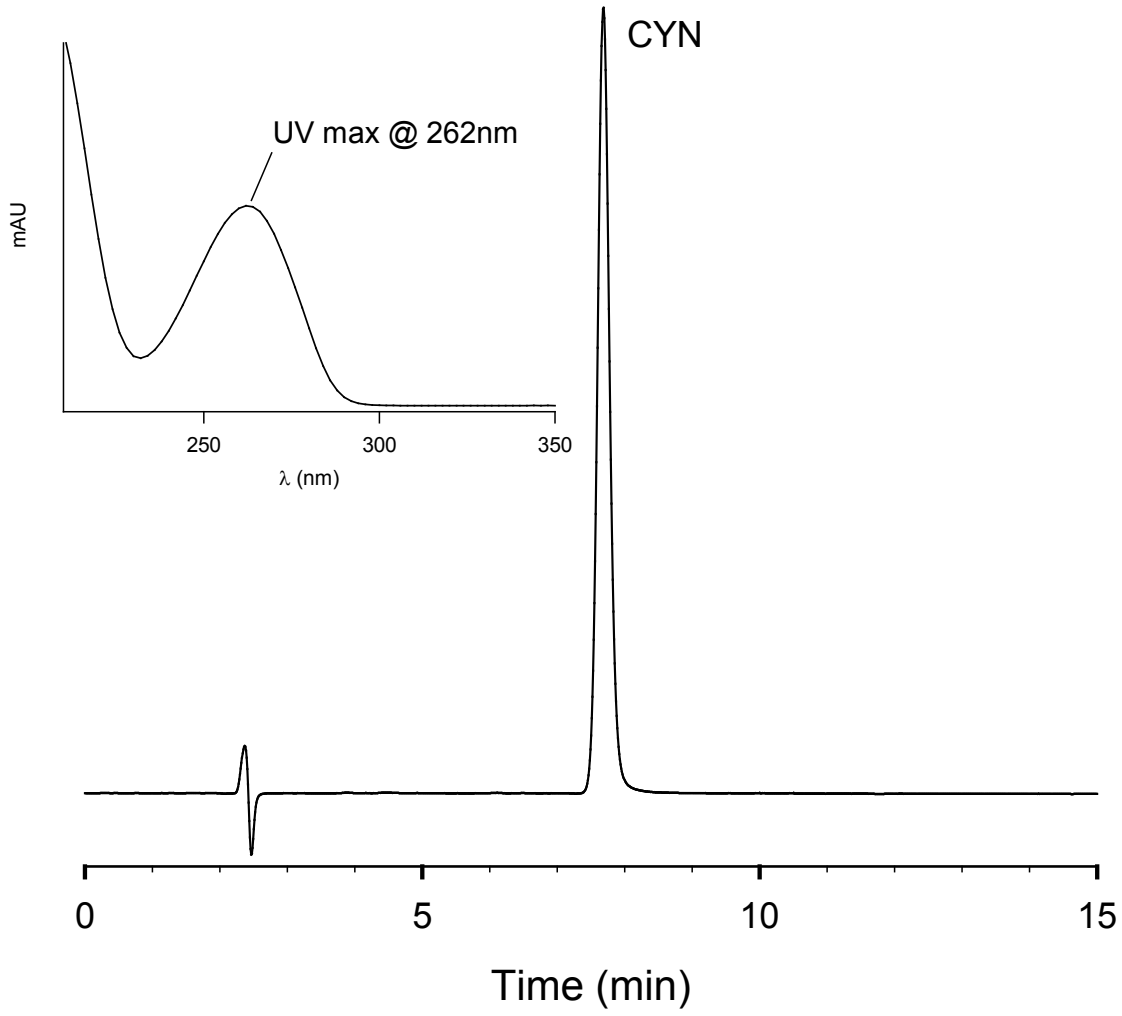


Figure 3: Analysis of CRM-CYN by LC-UV at 262 nm. Conditions: column = Zorbax SB-C8, 2.1 × 150 mm, held at +30 °C; mobile phase = 5% CH_3OH/H_2O with 2 mM heptanesulfonic acid (isocratic); flow rate = 0.2 mL/min; 10 µL injected.

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Acknowledgements

The following staff members of Measurement Science and Standards at NRC contributed to the production and certification of CRM-CYN: Y.M. Chen, S. Crain, W. Hardstaff, J. Ku, D. Marciniak, M. Quilliam, K. Reeves, K. Thomas and J. Walter.

Plankton biomass was produced and cylindrospermopsin isolated by A.R. Humpage, Australian Water Quality Centre, Adelaide, Australia.

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Y.M. Chen, K. Thomas, S. Crain and M.A. Quilliam: "CRM-CYN, a certified calibration solution reference material for cylindrospermopsin", Biotoxin Metrology Technical Report CRM-CYN-20050531, National Research Council Canada, Halifax, February 2006.

First certification completed: February 2006
Document version: 20130313

Accepted as a CRM, Halifax, March, 2006

Signed **:** 

Michael A. Quilliam, Ph.D.
Group Leader, Biotoxin Metrology
Measurement Science and Standards

This Certificate is only valid if the corresponding product was obtained directly from NRC or one of our qualified vendors.

Comments, information and inquiries should be addressed to:

National Research Council Canada
Measurement Science and Standards
1411 Oxford Street
Halifax, Nova Scotia B3H 3Z1

Telephone: 1-902-426-8281
Fax: 1-902-426-5426
Email: CRM-MRCBiotoxin-Biotoxines@nrc-cnrc.gc.ca

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Certificate of Analysis

NRC·CNRC Certified Reference Material

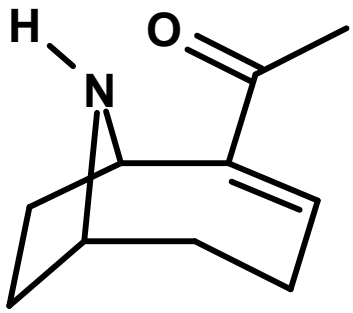
CRM-ATX (Lot# 20100721)

Certified Calibration Solution for Anatoxin-a

Anatoxin-a (ATX-a) is a cyanobacterial toxin linked to animal deaths in North America [1] and globally [2]. CRM-ATX is a certified calibration solution prepared to aid the analyst in the determination of ATX-a. Each ampoule contains approximately 0.5 mL of ATX-a dissolved in methanol/water (9:91, v/v) with 0.01% acetic acid. The concentration is suitable for calibration of liquid chromatography experiments and for standard addition and spike recovery studies.

Table 1: Certified concentration values for CRM-ATX

Compound	µmol/L (at +20 °C)	µg/mL (at +20 °C)	µg/g
Anatoxin-a	30.0 ± 1.1	4.96 ± 0.18	5.03 ± 0.18



(+) Anatoxin-a
CAS registry No.: 64285-06-9
Molecular formula: $C_{10}H_{15}NO$
Molecular weight: 165.232 g/mol
$[M+H]^+$: *m/z* 166.1226

Expiry date: 1 year from date of sale
Storage conditions: In the dark at -20 °C

Intended Use

CRM-ATX is a calibration solution certified reference material (CRM) designed for analytical method development and accurate quantitation of ATX-a. The CRM concentration makes it suitable for preparing a dilution series for calibration of instrumentation, such as liquid chromatography with detection by ultraviolet absorbance (LC-UV), fluorescence (LC-FL) or mass spectrometry (LC-MS), and for spiking control samples for recovery experiments.

Preparation of the CRM-ATX

ATX-a was isolated from an algal culture of *Aphanizomenon issatschenkoi* [3]. The toxin was extracted from the cells, purified by chromatography and then dried *in vacuo* to the anhydrous form [4,5]. The CRM solution was prepared by dissolving the purified ATX-a in degassed methanol/water (9:91, v/v) with 0.01% acetic acid. The solution was thoroughly mixed with a Teflon-coated stir bar and magnetic mixer, under argon. Aliquots were dispensed into amber glass ampoules pre-filled with argon, which were then immediately flame-sealed. Each ampoule contains approximately 0.5 mL of solution.

Structural Confirmation and Purity Assessment

The purity of the toxin was checked by the following techniques: 500 MHz ^{1}H NMR spectroscopy, LC-MS [6], LC-UV, capillary electrophoresis with UV detection (CE-UV) [7], and liquid chromatography with chemiluminescence nitrogen detection (LC-CLND) [8]. The molecular structure of ATX-a was confirmed by NMR spectroscopy [9] and quadrupole time-of-flight (QToF) mass spectrometry. The ^{1}H NMR spectrum of ATX-a is shown in Figure 1. The accurate mass was obtained for the $[M+H]^+$ ion at 166.12269 Da, which is within 0.05 mDa of the theoretical monoisotopic mass of 166.12264 Da (Δ = 0.30 ppm). A tandem MS spectrum of the $[M+H]^+$ ion was also acquired, as shown in Figure 2. NMR, LC-MS, LC-UV and LC-CLND were used to estimate the purity of ATX-a. No major impurities were observed.

Homogeneity

As this CRM is a true solution, there should be insignificant variation between ampoules. Nevertheless, approximately 0.8% of all ampoules produced were randomly selected and the ATX-a concentration was measured by LC-UV. The between-ampoule variation was measured to be no greater than the variation for replicate analyses of one solution, thus demonstrating acceptable homogeneity over the entire ampoule range.

Stability Study

Extensive studies have been conducted to determine the stability of CRM-ATX under various conditions. ATX-a is unstable under basic solutions and is sensitive to light [10]. Feasibility studies on previous ATX-a preparations have demonstrated excellent long-term stability of ATX-a solutions stored in acidified methanol/water at +4 °C. A long-term stability study was performed where CRM-ATX was stored at several temperatures (-80 °C, -20 °C, +4 °C, +25 °C and +37 °C). ATX-a exhibited no detectable decomposition when stored at -20 °C and had less than 3% decomposition at +4 °C after one year. Less than 2% degradation was observed at +37 °C after ten days.

Certified Value

The certified value of 30.0 ± 1.1 µmol/L (Table 1) for CRM-ATX is based on results obtained at NRC using two independent analytical methods: LC-CLND and quantitative nuclear magnetic resonance (QNMR) spectroscopy [11]. Calibration of both of these techniques was performed using accurate USP grade caffeine solutions.

The results shown in this certificate are traceable to the SI standard through gravimetrically prepared standards of caffeine of established purity. This product serves as a suitable reference material for laboratory quality assurance programs.

Uncertainty

The overall uncertainty estimate (U_{CRM}) for CRM-ATX includes uncertainties associated with batch characterization (u_{char}), between-bottle variation (u_{hom}), and instability during long-term storage (u_{stab}) [12-13]. These components can be combined as:

$$U_{CRM} = k\sqrt{u_{char}^2 + u_{hom}^2 + u_{stab}^2}$$

where k is the coverage factor (generally 2).

Quantitative measurements by CLND and QNMR contributed the most significant uncertainties. When combined they resulted in a relative uncertainty for batch characterization (u_{char}) of 0.018. As this CRM is a true solution, (u_{hom}) was not significant, as solutions are inherently homogenous [14]. Nevertheless, tests on homogeneity were performed (see Section Homogeneity), and the between-bottle variance was determined to be no greater than the measurement variance resulting in a relative value of 0.002 for (u_{hom}). Therefore, no uncertainty contribution from homogeneity testing was included in the combined uncertainty calculation for CRM-ATX. A long-term stability study was performed on this CRM (see Section Stability Study) which showed no observable loss of material when stored under the recommended conditions. The uncertainty due to stability (u_{stab}) [15] was extrapolated in order to reflect a shelf life of 1 year, but was also not significant with a relative value of 0.001. Applying a coverage factor of 2 resulted in a final relative expanded uncertainty in the certified value of 0.036.

Storage Instructions

To ensure the stability of ATX-a, the CRM should be stored in the dark in a freezer (approx. -20 °C). The CRM was found to be stable under these conditions. The CRM has been prepared under conditions that minimize the chance of bacterial contamination, but once the ampoule has been opened there may be a chance of contamination. Therefore, it is recommended that aliquots and dilutions of the CRM be stored in a good freezer to minimize the chances of bacterial degradation.

Expiry

If stored unopened at the recommended storage conditions (section Storage Instructions), the certified concentration of the CRM is valid for 1 year from the date of sale**.**

Instructions for Use

Prior to opening, each ampoule should be allowed to warm to room temperature and the contents should be thoroughly mixed. The ampoule should be inverted several times, then held upright, tapped to ensure that most of the solution drains to the bottom, and opened at the pre-scored mark. Once an ampoule has been opened, accurate aliquots should be removed with calibrated volumetric equipment and transferred to volumetric flasks or vials. An increase in concentration due to evaporation of solvent will occur if the solution is left opened for more than a few minutes. It is recommended that the CRM should not be evaporated to dryness because of the potential for losses on glass surfaces. A useful procedure that ensures accurate dilutions involves using a balance to determine weights of the dispensed aliquot and the final diluted solution, assuming that water is used as diluent (the density of the CRM solution is 0.9851 g/mL at +24 °C). *Note*: The volume of the solution is not certified. Only the concentration is certified.

Safety Instructions

If sufficient quantities are ingested, ATX-a can cause paralysis and even death. Only qualified personnel should handle the solution and appropriate disposal methods should be used. Heavy gloves and eye protection should be used when opening the ampoule in the event the glass shatters. A material safety data sheet (MSDS) is available for CRM-ATX.

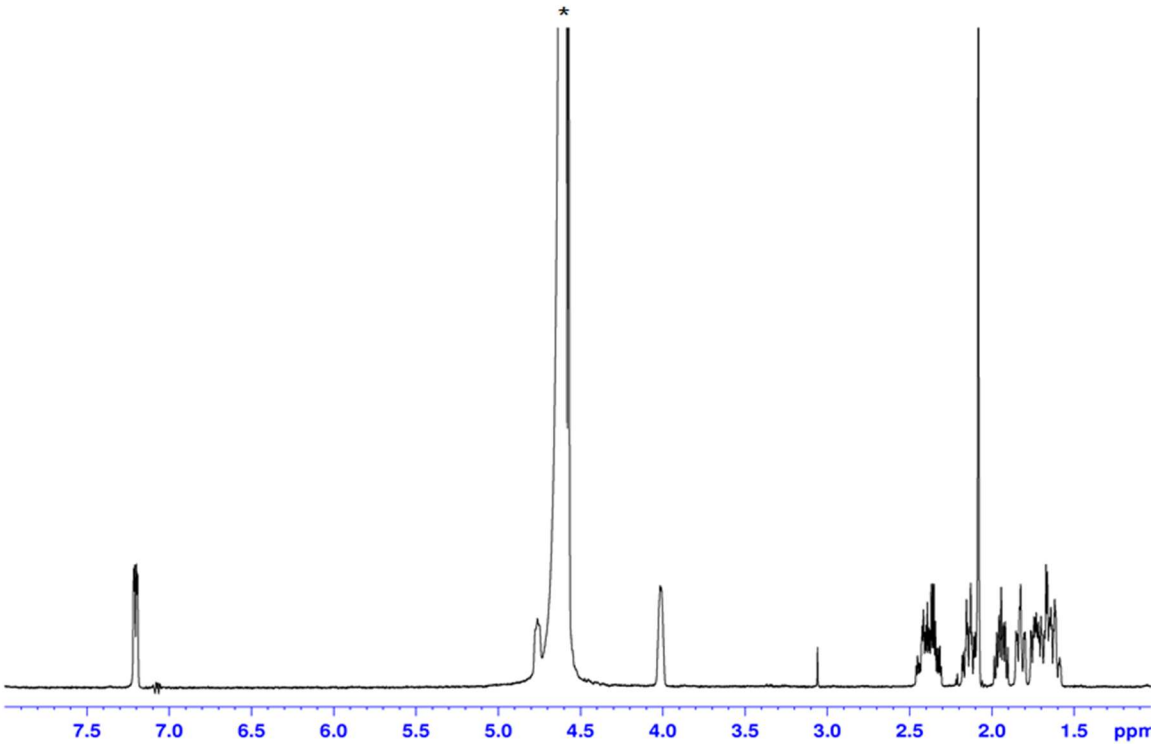


Figure 1: Proton NMR spectrum of ATX-a. The resonance marked with * is due to water.

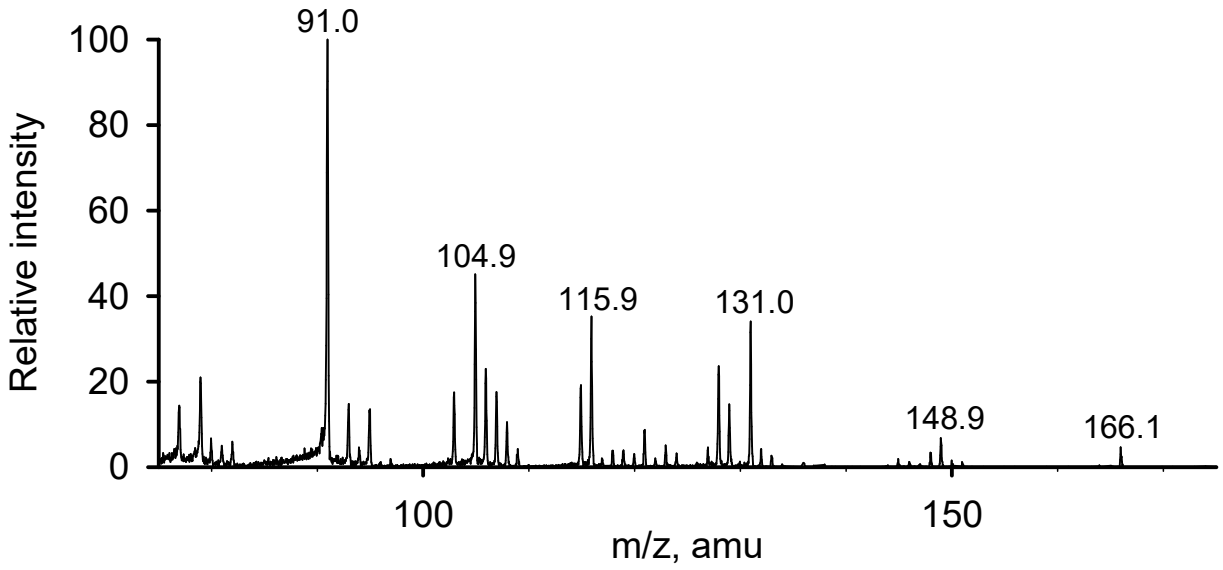


Figure 2: Product ion spectrum of $[M+H]^+$ ion (*m/z* 166) of ATX-a from an LC-MS/MS analysis of CRM-ATX. Conditions: AB Sciex API4000 QTRAP; collision energy = 40 V; declustering potential = 50 V.

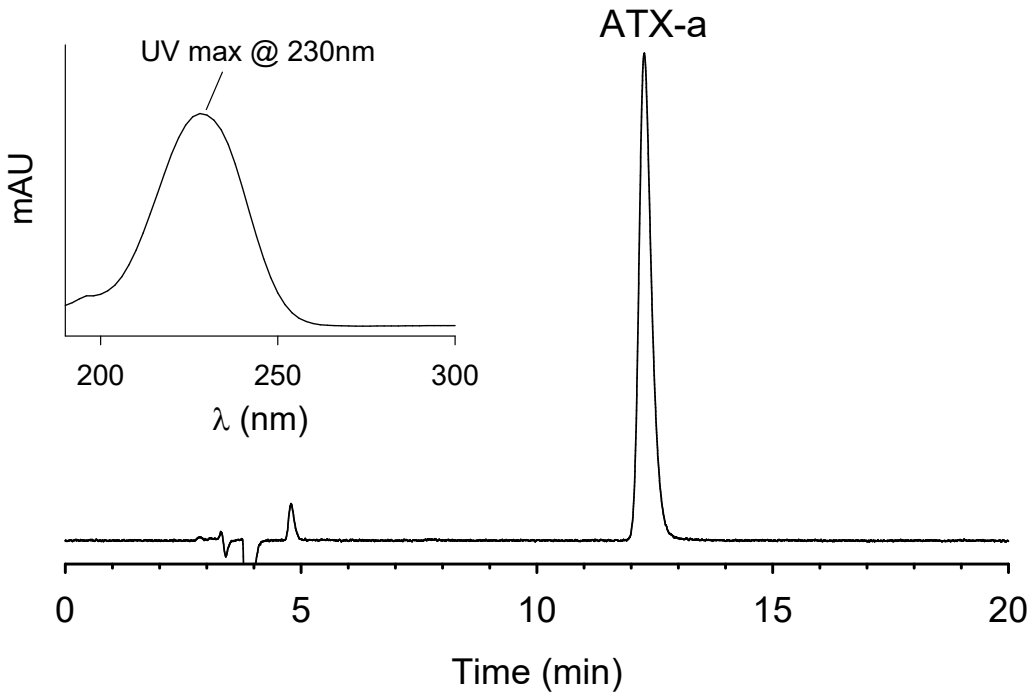


Figure 3: Analysis of CRM-ATX by LC-UV (230 nm). Conditions: Agilent 1100 LC with a Hewlett Packard 1050 UV detector with a standard flow cell; 250 mm × 2.1 mm i.d. column with 3 µm Phenomenex Columbus C18 at +30 °C; 0.2 mL/min $CH_3OH/H_2O/CF_3COOH$ (10:89.9:0.1); 10 µL injection. Inset shows a UV spectrum acquired separately on a diode-array detector.

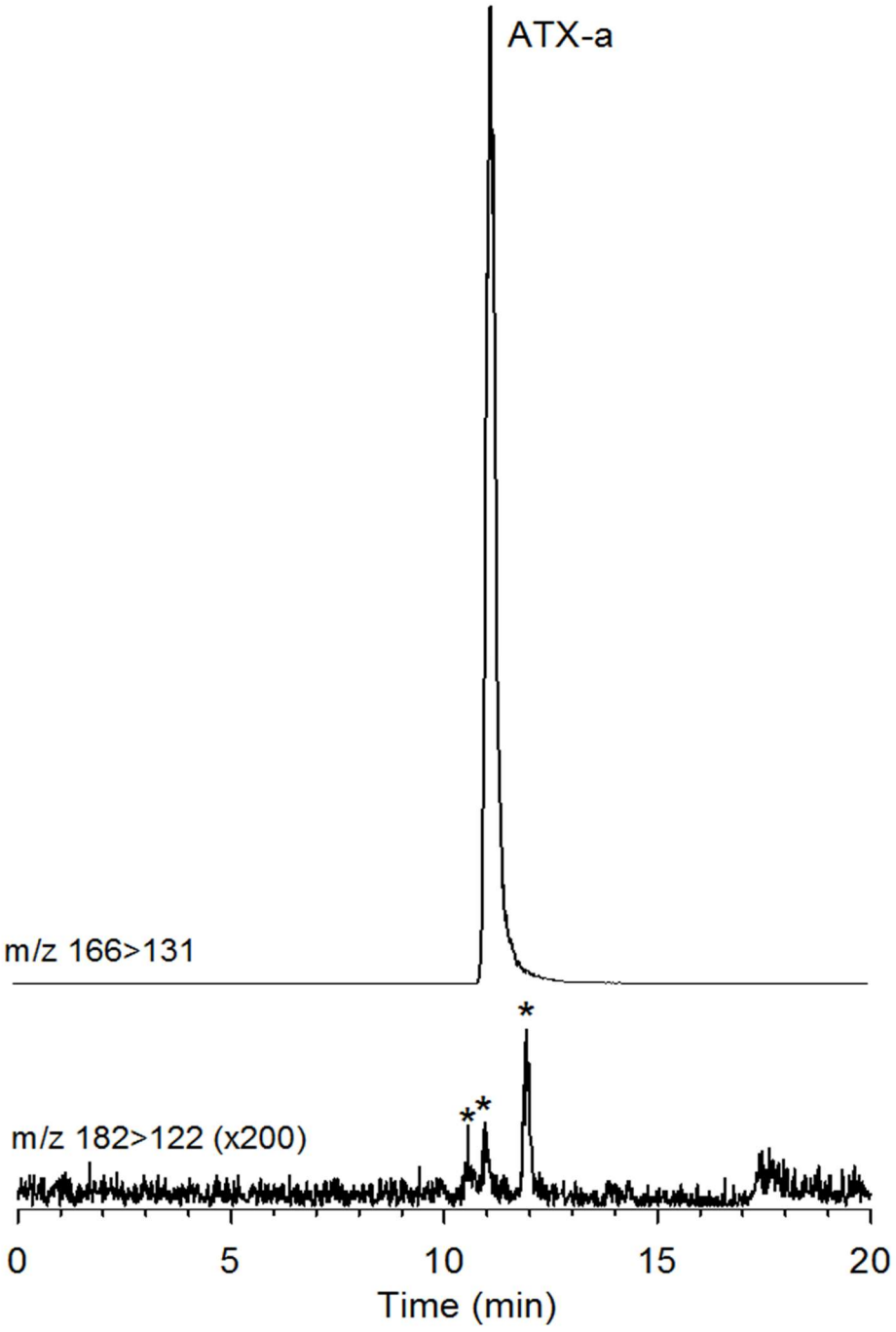


Figure 4: Analysis of CRM-ATX by LC-MS with selected reaction monitoring. Impurities (*) with an $[M+H]^+$ ion at m/z 182 were detected only at very low levels. Conditions: Agilent 1200 LC and AB Sciex API4000 QTRAP; 150 mm × 2 mm i.d. 3 µm Toso-Haas Amide-80 column at +40°C; gradient elution 90 to 70% B over 25 min, where A = H_2O with 50 mM NH_4COOH and 2 mM HCOOH, and B= CH_3CN. Flow rate = 0.2 mL/min.

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15. Guide to the Expression of Uncertainty in Measurement, ISBN 92-67-10188-9, 1st edition ISO, Geneva, Switzerland (1993).

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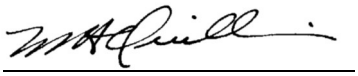
Signed **:** 

Michael A. Quilliam, Ph.D.
Group Leader, Biotoxin Metrology
Measurement Science and Standards

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Microcystin-LF Standard

CATALOG #	300646
SOURCE	Isolated from *Microcystis aeruginosa*
PRESENTATION	Solution
CONCENTRATION	10 µg/mL in Methanol, 1 mL
PURITY	>95% HPLC, 238 nm
STORAGE	Aliquot and store at < –20 °C
STABILITY/SHELF LIFE	Two years if stored at < –20 °C
APPEARANCE	Clear
HANDLING	If you are not fully trained or are unaware of the hazards involved, do not use this compound.

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Certificate of analysis

Certified reference material code: CRM-03-MCRR

Name: Microcystin-RR in methanol. Batch: 15-001

Description: This Certified Reference Material (CRM) is a solution of Microcystin-RR (CAS Number 111755-37-4) in methanolic solution.

Intended use: Calibration of equipment or a measurement procedure. Establishing metrological traceability. Method validation. Quality control of a measurement or measurement procedure. For laboratory use only.

Certified values and uncertainties: The certified concentration given below is based on results obtained from the gravimetric preparation of this solution previous quantity determination by ^{1}H-qNMR in Varian 500 MHz equipment (USC).

Concentration of Microcystin-RR (MCRR)* (95% Confidence Interval)	**(12.2 ± 0.8) µmol / kg**
	(12.7 ± 0.9) µg / g

***** See non-certified data section of this certificate.

The starting material is measured by ^{1}H-qNMR against a Benzoic acid standard for quantitative NMR, certified reference material TraceCERT (Fluka analytical) followed by gravimetric preparation using high precision balances calibrated with SI-traceable weights. Consequently the quantified values are traceable to the International System of Units (SI) via an unbroken chain of comparisons through validated methodology.

Homogeneity was evaluated by analysis of variance on 2% of stratified randomly selected ampoules over the entire batch (6 replicate analyses per ampoule). A possible heterogeneity is hidden by the method repeatability. Therefore a maximum possible heterogeneity was calculated as u_{bb}, 1.62%. The Stability studies after storage of selected units were performed at -20°C for a storage time of 12 months. Using the data from the long-term study, the uncertainty due to possible degradation was calculated as u_{lts}, 2.28%. Both studies were verified against an independently prepared calibration solution.

The components of Standard Uncertainty include related uncertainties due to characterization, heterogeneity, long term instability, short term instability (dispatch), and bulk assay, Table 1. The results are expressed as the certified value ± the expanded uncertainty (calculated by combination of the squared contribution values). Estimated expanded uncertainty with a coverage factor k = 2, corresponding to a level of confidence of about 95 %, as defined in the Guide to the expression of uncertainty in measurement, ISO35.

The certificate is a summary of an extensive program of work involving selection and purification of the material, assessing its suitability and measuring the properties to be certified.

Expiration of Certification: *This certificate of CRM-03-MCRR, 15-001 batch is valid 12 months after purchase date within the measurement uncertainties specified*, provided the CRM is handled and stored in accordance with the instructions given in this certificate. This validity may be extended if further evidence of stability becomes available.

Maintenance of Certification: The material will be subjected to regular Laboratorio CIFGA stability monitoring programme to control its further stability over the period of its certification. If substantive changes occur that affect the certification before the expiration date, Laboratorio CIFGA will notify the purchaser.

Instructions for proper handling use: This material contains toxic material, and should be handled with care. Read MSDS before using. Material Safety Data sheet for information regarding CRM-03-MCRR is enclosed in the package. Use proper disposal methods.

Before opening an ampoule it must be guaranteed that the content is a liquid and properly mixed to ensure homogeneity. Sample aliquots for analysis should be withdrawn at 15 °C to 25 °C immediately after opening the ampoules and should be processed without delay for the certified value to be valid within the stated uncertainty. Ampoule should not remain open longer than few minutes due to solvent volatility and air contamination.

Storage conditions: The original sealed ampoules should be stored at temperatures below/at -20 ºC (freezer) until use. Unopened ampoules should be stored upright under normal laboratory conditions inside the original container supplied.

Source and Preparation of Material: Cyclic heptapeptide toxin isolated from the freshwater cyanobacterium *Microcystis aeruginosa*. After purification, identity of the material was confirmed by ^{1}H-NMR and LC-MS/MS, Figures 1 and 2. Finally, 0.5 mL aliquots of MCRR solution were dispensed into 2-mL amber argon-filled glass ampoules, which were then flame sealed and ready to use for calibration.

Non-certified data:

This certified concentration of Microcystin-RR presents a low level (0.216 ± 0.002) µmol/g (1.7%) of [DAsp^{3}]-, (0.135 ± 0.006) µg/g (1.0%) of [Dha^{7}]- and (0.03 ± 0.01) µmol/g (0.3%) of [D-(GluOCH3)^{6}] tentative MCRR analogues. In order to get a certified concentration, quantification for these isomers have been conducted jointly, therefore certified concentration is the sum of all these compounds. *Percentage values not certified.*

Taking into account the density of methanol at 20 ºC ($\rho^{20} = 0.7915\ \mathrm{g/mL}$), *non-certified volumetric concentration* values are:

Concentration of Microcystin-RR (MCRR) (95% Confidence Interval)	(9.7 ± 1.0) µM
	(10.1 ± 1.1) µg / mL

Concentration of Microcystin-RR and impurities are neglected in order to apply solution density value.

Purity analysis was performed by qNMR and UPLC MS/MS. The percentage purity of principal signal of MCRR was measured by the difference qNMR method and UPLC MS/MS and the material molar ratio purity is ≥ 97 %. *Percentage value not certified*.

Additional lectures:

1. UNE-EN ISO 17034 *General Requirements for the competence of reference material producers*.

2. ISO Guide 35 *Reference materials - Guidance for characterization and assessment of homogeneity and stability*.

Figures

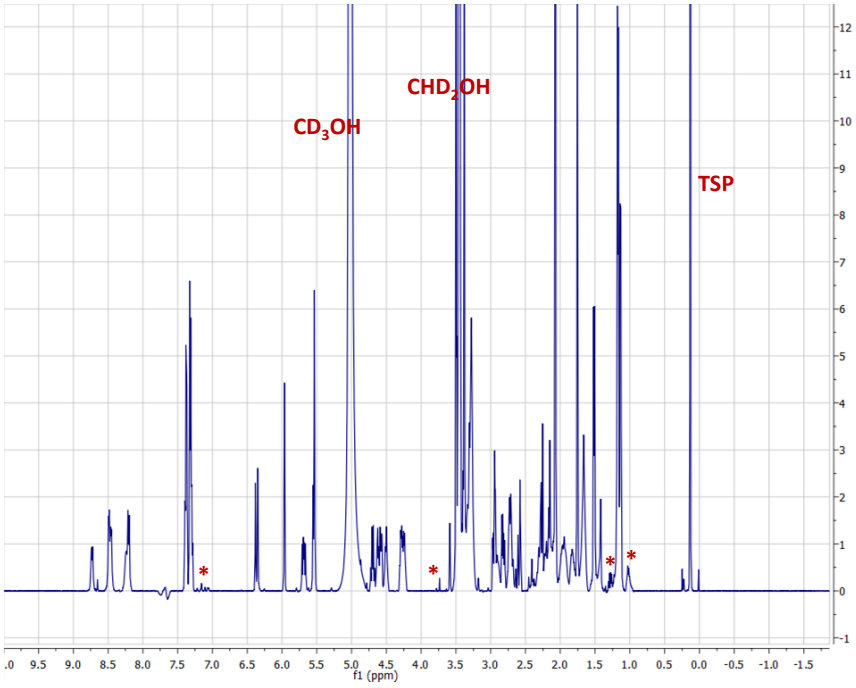


Figure 1.- ^{1}H-NMR spectrum of MCRR solution, Varian 500 MHz, 5 mM solution of MCRR in CD_3OH used in preparation of CRM-03-MCRR batch 15-001. No identified impurities are highlighted.

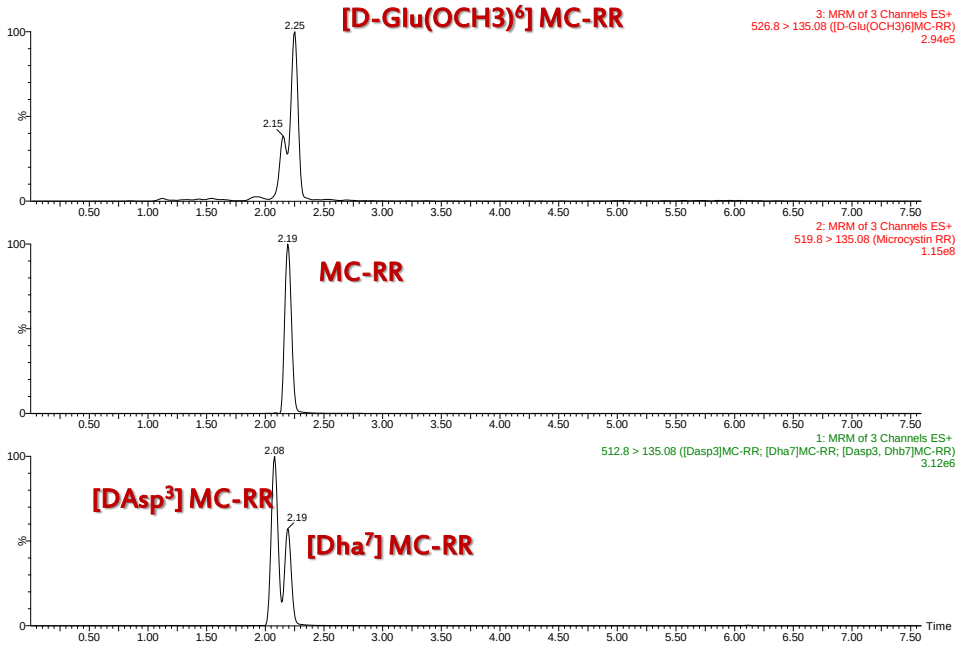


Figure 2.- Analysis of the **CRM-03-MCRR** solution by UPLC-MS/MS. Conditions: ACQUITY UPLC HSS T3 1.7µm, 100x2.1 mm, UPLC column. Elution conditions, gradient mode with mobile phases: (A) Water and (B) acetonitrile, both with 0.1% formic acid; Gradient: 0 min 30% B; 0.8 min 30% B; 2.5 min 60% B; 5.0 min 100% B; 5.5 min 100% B; 5.6 min 30% B; flow rate: 0.3 mL/min. Temperature: 30°C. MS detector: Waters Quattro Premier XEVO using MRM transitions of Microcystin-RR.

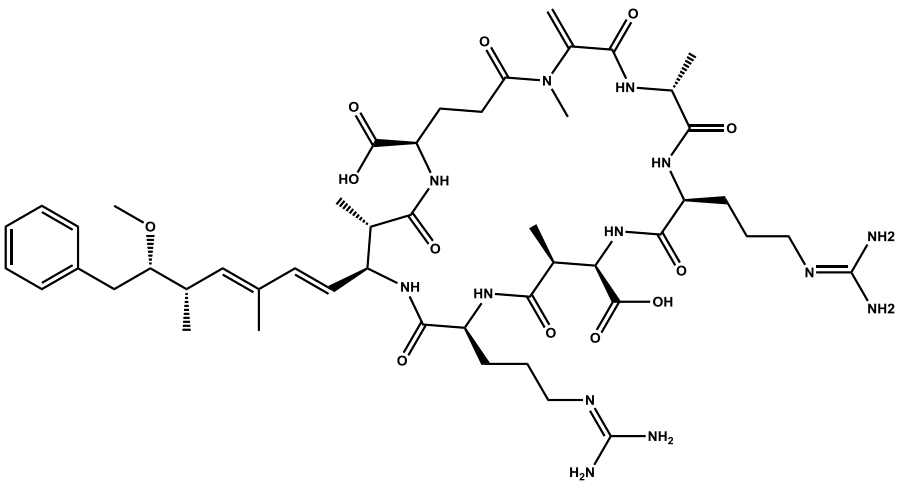
Table 1.- Uncertainties contribution for the certification of **CRM-03-MCRR**. ***Char****: qnmr quantification;* ***ba****: bulk assay;* ***bb****: homogeneity test;* ***lts****: long term stability test.*

Uncertainty contribution parameter	Uncertainty values
	MCRR + minor analogues*
u_{char}/%	2.05
u_{ba}/%	0.10
u_{bb}/%	1.62
u_{lts}/%	2.28
Expanded uncertainty (*k*=2) / %	6.94

Short-term stability study, test for slope significance, has been carried out to simulate the conditions of transport. Packaged vials were exposed for 9 days, 6 days, 3 days and 0 hr (-80 ºC, control), with an isochronous design being used to enable subsequent LC-MS/MS analysis of CRMs to be conducted under repeatability conditions. After 9 days at 37 ºC – 40ºC temperature results indicated continued stability. With these conditions, no change is expected in the property values of the CRM. The short-term stability uncertainty (u_{sts}) was not considered relevant as an uncertainty component and it was not included in the u_{CRM} uncertainty calculation.

***** Microcystin-RR and two structural closely related isomers have been quantified jointly.

Table 2.- Molecular information.

Name	Microcystin-RR
CAS NUMBER	111755-37-4
Molecular formula	$C_{49}H_{75}N_{13}O_{12}$
Molecular Weight	1038.20 g·mol^{-1}
Monoisotopic molecular weight	1037.57 g·mol^{-1}
2D Structure	

Inquiries concerning this Reference Material should be directed to:

Laboratorio CIFGA S.A.

Plaza Santo Domingo 20 5ª planta

27001 • Lugo • Spain

Tel. 0034 608 073 245

E-mail: cifga.std100@cifga.es

RM PRODUCER'S APPROVING OFFICER:

Certification Manager: Álvaro Antelo

This Certificate is only valid if the product was obtained directly from Laboratorio CIFGA S.A. or one of our authorized distributors.

Certificate Revision History: *March, 14th 2016* (Original certificate issue date, revision 1).

November, 19th 2016 (This certificate has undergone revision to change the uncertainty following stability testing, extension of certification period, editorial changes, revision 2).

January, 15th 2019. Intended use update. Editorial changes. No attempt was made to re-evaluate the certificate values or any technical data presented on this certificate *(certificate rev. 3)*.

Microcystin-YR Standard

CATALOG #	300638
SOURCE	Isolated from *Microcystis aeruginosa*
PRESENTATION	Solution
CONCENTRATION	10 µg/mL in Methanol, 1 mL
PURITY	>95% HPLC, 238 nm
STORAGE	Aliquot and store at < –20 °C
STABILITY/SHELF LIFE	Two years if stored at < –20 °C
APPEARANCE	Clear
HANDLING	If you are not fully trained or are unaware of the hazards involved, do not use this compound.

FOR RESEARCH USE ONLY

Eurofins Abraxis

124 Railroad Drive
Warminster, PA 18974
www.abraxiskits.com

T | (215) 357 3911
F | (215) 357 5232

CRM-MCLR

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2016-06-17 Revision date: 2016-06-17 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : CRM-MCLR

Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Certified Calibration Solution for Microcystin-LR, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1411 Oxford Street
Halifax, Nova Scotia, Canada B3H 3Z1
T 1-902-426-8281

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Flammable Liquid 3
Acute Toxicity 3 (Oral)
Acute Toxicity 3 (Dermal)
Acute Toxicity 3 (Inhalation)
Eye Irritation 2A
Reproductive Toxicity 1B
Specific Target Organ Toxicity After Single Exposure 1
Specific Target Organ Toxicity After Single Exposure 3

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :

GHS02 GHS06 GHS07 GHS08

Signal word (GHS) : Danger

Hazard statements (GHS) : Flammable liquid and vapor. Toxic if swallowed, in contact with skin, or if inhaled. Causes serious eye irritation. May damage fertility or the unborn child. Causes damage to organs. May cause drowsiness or dizziness.

Precautionary statements (GHS) : Keep away from heat/sparks/open flames/hot surfaces.– No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. Call a poison center/doctor if you feel unwell. If swallowed:

Immediately call a poison center/doctor. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Methyl alcohol	(CAS No) 67-56-1	42.8
Microcystin-LR	(CAS No) 101043-37-2	0.0011

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.

Symptoms/injuries after skin contact : Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : Toxic if swallowed. May be fatal or cause blindness if swallowed. This material contains methanol, which, when ingested, may cause acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death. May cause stomach distress, nausea or vomiting. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures. If ingested in sufficient quantities, microcystins cause gastrointestinal and hepatic illness.

Other symptoms	:	The toxicity of microcystins is still being investigated. Microcystins are primarily hepatoxins and animal experiments have shown chronic liver injury from continuous oral exposure. There is some evidence of tumor promotion in animal studies.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Powder, water spray, foam, carbon dioxide.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon.
Explosion hazard	:	May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting	:	Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Eliminate sources of ignition. Use special care to avoid static electric charges. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment	:	Dike and contain spill. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up	:	Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling	:	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. Use only non-sparking tools. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.
Hygiene measures	:	Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	:	Keep locked up and out of reach of children. Keep container tightly closed. Keep cool. Store in a well-ventilated place. Store in the dark in a freezer (preferably < -12°C / <10.4°F).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methyl alcohol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
IDLH	US IDLH (ppm)	6000 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm

Microcystin-LR (101043-37-2)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear liquid

Colour : Clear / Colourless

Odour : Slight alcohol

Odour threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : 28 °C (82.4 °F) (50% methanol/water, v/v)

Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Flammable
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	0.925 g/mL
Relative vapour density at 20 °C	:	No data available
Solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Moisture, acids, acid chlorides, acid anhydrides, oxidizing agent, alkali metals, reducing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed, in contact with skin, or if inhaled.

CRM-MCLR	
LD50 oral rat	>50 but ≤300 mg/kg (Calculated using ATE values)
LD50 dermal rabbit	>200 but ≤1000 mg/kg (Calculated using ATE values)
LC50 inhalation rat	>2 but ≤10 mg/L/4h (Calculated using ATE values)

Methyl alcohol (67-56-1)	
LD50 oral rat	6200 mg/kg
LC50 inhalation rat	22500 ppm/8h

Microcystin-LR (101043-37-2)	
LD50 intraperitoneal, mouse	11.0 µg/kg

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.

Microcystin-LR (101043-37-2)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness. Causes damage to organs.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.
Symptoms/injuries after skin contact	: Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: Toxic if swallowed. May be fatal or cause blindness if swallowed. This material contains methanol, which, when ingested, may cause acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death. May cause stomach distress, nausea or vomiting. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures. If ingested in sufficient quantities, microcystins cause gastrointestinal and hepatic illness.
Other symptoms	: The toxicity of microcystins is still being investigated. Microcystins are primarily hepatoxins and animal experiments have shown chronic liver injury from continuous oral exposure. There is some evidence of tumor promotion in animal studies.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

CRM-MCLR	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CRM-MCLR	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

UN-No.(DOT/TDG) : UN1986

Proper Shipping Name (DOT/TDG) : Alcohols, flammable, toxic, n.o.s. (Methanol solution)

Class (DOT/TDG) : 3 (6.1)

Hazard labels (DOT/TDG) :

Packing group (DOT/TDG) : III

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Microcystin-LR	CAS No 101043-37-2

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Microcystin-LR	CAS No 101043-37-2

Methyl alcohol (67-56-1)	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue : 2016-06-17

Revision date : 2016-06-17

Version # : 1.0

Prepared by : Nexreg Compliance Inc.

DISCLAIMER:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.

CRM-MCLR

Fiche de données de sécurité

selon la norme sur la communication de risques (Hazard Communication Standard, CRF29 1910.1200) HazCom 2012 et selon le Règlement sur les produits dangereux (RPD) du SIMDUT 2015

Date d'émission : 2016-06-17 Date de révision : 2016-06-17 Version : 1,0

RUBRIQUE 1 : Identification

1.1. Identificateur de produit

Nom du produit : CRM-MCLR

Code du produit : Non disponible

1.2. Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées

Utilisation de la substance/mélange : Solution d'étalonnage certifiée pour la microcystine-LR, pour utilisation en laboratoire seulement

1.3. Renseignements concernant le fournisseur de la fiche de données de sécurité

Conseil national de recherches Canada
1411, rue Oxford
Halifax (Nouvelle-Écosse), Canada, B3H 3Z1
T 1-902-426-8281

Conseil national de recherches Canada | National Research Council Canada

1.4. Numéro d'appel d'urgence

Numéro d'urgence : CANUTEC 1-613-996-6666

RUBRIQUE 2 : Identification des dangers

2.1. Classification de la substance ou du mélange

Classification GHS

Liquides inflammables 3
Toxicité aiguë 3 (Orale)
Toxicité aiguë 3 (Cutané)
Toxicité aiguë 3 (Inhalation)
Irritation oculaire 2A
Toxicité pour la reproduction 1B
Toxicité pour certains organes cibles — exposition unique 1
Toxicité pour certains organes cibles — exposition unique 3

2.2. Éléments d'étiquetage

Étiquetage GHS

Pictogrammes de danger (GHS) :

GHS02 GHS06 GHS07 GHS08

Mention d'avertissement (GHS) : Danger

Mentions de danger (GHS) : Liquide et vapeurs inflammables. Toxique en cas d'ingestion, par contact cutané ou par inhalation. Provoque une sévère irritation des yeux. Peut nuire à la fertilité ou au fœtus. Risque avéré d'effets graves pour les organes. Peut provoquer somnolence ou vertiges.

Conseils de prudence (GHS) : Tenir à l'écart de la chaleur/ des étincelles/des flammes nues/des surfaces chaudes. Ne pas fumer. Maintenir le récipient fermé de manière étanche. Mise à la terre/liaison équipotentielle du récipient et du matériel de réception. Utiliser du matériel électrique/de ventilation/d'éclairage/ antidéflagrant. Ne pas utiliser d'outils produisant des étincelles. Prendre des mesures de précaution contre les décharges électrostatiques. Se laver les mains soigneusement après manipulation. Ne pas manger, boire ou fumer en manipulant ce produit. Utiliser seulement en plein air ou dans un endroit bien ventilé. Se procurer les instructions avant utilisation.

Ne pas manipuler avant d'avoir lu et compris toutes les précautions de sécurité. Porter des gants de protection/ des vêtements de protection/un équipement de protection des yeux/un équipement de protection du visage. Ne pas respirer les poussières/ fumées/gaz/brouillards /vapeurs/aérosols. En cas d'exposition prouvée ou suspectée : consulter un médecin. En cas de contact avec la peau (ou les cheveux) : Enlever immédiatement tous les vêtements contaminés et les laver avant de les réutiliser. Rincer la peau à l'eau/Se doucher. Appeler un centre antipoison/médecin en cas de malaise. En cas d'ingestion : Appeler immédiatement un centre antipoison/ médecin. Rincer la bouche. En cas d'inhalation : transporter la personne à l'extérieur et la maintenir dans une position où elle peut confortablement respirer. Appeler un centre antipoison/médecin. En cas de contact avec les yeux : rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer. Si l'irritation oculaire persiste : consulter un médecin. Stocker dans un endroit bien ventilé. Tenir au frais. Garder sous clef. Éliminer le contenu/le récipient conformément à la réglementation locale/ régionale/nationale/internationale.

2.3. Autres dangers

Aucune information complémentaire disponible

2.4. Toxicité aiguë inconnue (GHS)

Non applicable

RUBRIQUE 3 : Composition/information sur les ingrédients

3.1. Substances

Non applicable

3.2. Mélanges

Nom	Identificateur de produit	%
Alcool méthylique	(n° CAS) 67-56-1	42,8
Microcystine-LR	(n° CAS) 101043-37-2	0,0011

RUBRIQUE 4 : Premiers soins

4.1. Description des premiers secours

Premiers soins après inhalation : En cas d'inhalation, transporter à l'air frais la personne exposée. Si elle ne respire plus, pratiquer la respiration artificielle. En cas de difficultés respiratoires, appliquer un masque à oxygène. Consulter immédiatement un médecin.

Premiers soins après contact avec la peau : En cas de contact, rincer immédiatement et abondamment avec de l'eau. Retirer les vêtements/souliers contaminés. Laver les vêtements avant de les porter à nouveau. Si une irritation cutanée se développe et persiste, consulter un médecin.

Premiers soins après contact oculaire : En cas de contact, rincer immédiatement et abondamment avec de l'eau pendant au moins 15 minutes. Le cas échéant, retirer les lentilles de contact si elles peuvent être facilement enlevées. Si l'irritation persiste, consulter un médecin.

Premiers soins après ingestion : Si le produit a été ingéré, ne PAS provoquer le vomissement à moins que ceci ait été demandé par du personnel médical. Ne jamais administrer quoi que ce soit par voie orale à une personne inconsciente. Rincer la bouche. Appeler immédiatement un CENTRE ANTIPOISON ou un médecin.

4.2. Principaux symptômes et effets, aigus et différés

Symptômes/lésions après inhalation	:	Toxique par inhalation. Peut causer l'irritation des voies respiratoires. Des vapeurs peuvent causer des narcoses, des maux de tête, une respiration difficile, des étourdissements, de la somnolence, une perte de conscience et même la mort.
Symptômes/lésions après contact avec la peau	:	Toxique par contact cutané. Peut irriter la peau. Les symptômes peuvent inclure des rougeurs, des dessèchements, une délipidation et une gerçure de la peau. Les autres symptômes sont similaires à ceux qui apparaissent dans les cas d'inhalation et d'ingestion.
Symptômes/lésions après contact oculaire	:	Provoque une sévère irritation des yeux. Les symptômes peuvent inclure un inconfort ou des douleurs, un clignement excessif des paupières et une production excessive de larmes, avec une rougeur prononcée et un gonflement de la conjonctive.
Symptômes/lésions après ingestion	:	Toxique en cas d'ingestion. Peut être mortel ou causer la cécité si avalé. Le produit contient du méthanol qui, à l'ingestion, peut provoquer une acidose et des atteintes oculaires allant d'une diminution de la capacité visuelle à la cécité totale, et même à la mort. Peut causer un malaise gastro-intestinal, des nausées ou des vomissements. L'ingestion peut causer des maux de tête, des vertiges, de la somnolence, une acidose métabolique, un coma, ou des crises convulsives. Si ingéré en grande quantité, les microcystines causent des maladies gastro-intestinales et hépatiques.
Autres symptômes	:	La toxicité des microcystines fait toujours l'objet d'une enquête. Les microcystines sont essentiellement composées d'hépatoxines, et les expériences effectuées sur des animaux ont démontré des lésions hépatiques chroniques au cours d'une exposition continue par voie orale. Les études sur les animaux ont suggéré la promotion de tumeurs.

4.3. Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Les symptômes peuvent ne pas apparaître immédiatement. En cas d'accident ou de malaise, consulter immédiatement un médecin (si possible, lui montrer l'étiquette ou la fiche signalétique).

RUBRIQUE 5 : Mesures à prendre en cas d'incendie

5.1. Moyens d'extinction

Moyens d'extinction appropriés	:	Poudre, eau pulvérisée, mousse, dioxyde de carbone.
Agents d'extinction non appropriés	:	Ne pas utiliser un fort courant d'eau.

5.2. Dangers particuliers résultant de la substance ou du mélange

Danger d'incendie	:	Liquide et vapeurs inflammables. Les produits de combustion peuvent inclure, sans s'y limiter : oxydes de carbone.
Danger d'explosion	:	Peut former des mélanges vapeur-air inflammables/explosifs.

5.3. Conseils aux pompiers

Protection en cas d'incendie	:	Rester en amont du vent par rapport à l'incendie. Porter un habit pare feu complet incluant un équipement de respiration (SCBA). Refroidir les contenants exposés à l'incendie avec de l'eau pulvérisée. Les vapeurs peuvent être plus lourdes que l'air, et elles peuvent voyager le long du sol jusqu'à une source d'ignition distante et s'enflammer.

RUBRIQUE 6 : Mesures à prendre en cas de déversement accidentel

6.1. Précautions individuelles, équipement de protection et procédures d'urgence

Mesures générales	:	Éliminer toute source d'ignition. Prendre des précautions spéciales pour éviter des charges d'électricité statique. Porter les vêtements protecteurs recommandés dans la section 8. Isoler la zone de danger et interdire l'accès au personnel non protégé et non autorisé.

6.2. Méthodes et matériel de confinement et de nettoyage

Pour le confinement : Endiguer et contenir le produit renversé. Contenir et/ou absorber le déversement avec une substance inerte (par ex. du sable ou de la vermiculite) puis placer ensuite dans un conteneur adapté. Ne pas laisser s'écouler dans les égouts ni dans les cours d'eau. Utiliser l'équipement de protection individuelle (EPI) approprié.

Procédés de nettoyage : Déblayer la substance avec une pelle et la placer dans un conteneur de récupération. Ventiler la zone.

6.3. Référence à d'autres rubriques

Voir la section 8 pour des conseils supplémentaires sur les vêtements et l'équipment de protection, et la section 13 pour d'autres conseils sur l'émination.

RUBRIQUE 7 : Manutention et stockage

7.1. Précautions à prendre pour une manipulation sans danger

Dangers supplémentaires lors du traitement : Manipuler les conteneurs vides avec précaution, les vapeurs résiduelles étant inflammables.

Précautions à prendre pour une manipulation sans danger : Conserver à l'écart de toute source d'ignition - Ne pas fumer. Prendre des mesures de précaution contre les décharges électrostatiques. Éviter tout contact avec les yeux, la peau ou les vêtements. Ne pas respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols. Ne pas avaler. Manipuler et ouvrir le récipient avec prudence. Ne pas utiliser d'outils produisant des étincelles. Ne pas manger, ne pas boire et ne pas fumer pendant l'utilisation. Utiliser seulement en plein air ou dans un endroit bien ventilé.

Mesures d'hygiène : Lessiver les vêtements contaminés avant de les réutiliser. Se laver les mains avant de manger, de boire ou de fumer.

7.2. Conditions nécessaires pour assurer la sécurité du stockage, tenant compte d'éventuelles incompatibilités

Mesures techniques : Suivre des procédures de mise à la terre appropriées pour éviter l'électricité statique.

Conditions d'entreposage : Conserver sous clé et hors de portée des enfants. Maintenir le récipient fermé de manière étanche. Tenir au frais. Entreposer dans un endroit bien ventilé. Entreposer à l'obscurité dans le congélateur (préférablement < -12°C / < 10,4°F).

RUBRIQUE 8 : Contrôle de l'exposition/ protection individuelle

8.1. Paramètres de contrôle

Alcool méthylique (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
IDLH	US IDLH (ppm)	6000 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm

Microcystine-LR (101043-37-2)	
ACGIH	Sans objet

Microcystine-LR (101043-37-2)	
OSHA	Sans objet
IDLH	Sans objet
NIOSH	Sans objet

8.2. Contrôles de l'exposition

Contrôles techniques appropriés : Aérer/ventiler les lieux pour maintenir l'exposition aux poussières en suspension, émanations chimiques, fumée, etc, sous les limites permises.

Protection des mains : Porter des gants résistant aux produits chimiques.

Protection oculaire : Porter des lunettes de protection contre les poussières/les éclaboussures (correctement ajustées), ainsi qu'une protection faciale (écran facial).

Protection de la peau et du corps : Porter un vêtement de protection approprié.

Protection des voies respiratoires : En cas de ventilation insuffisante, porter un appareil respiratoire approprié. Le choix de l'appareil de protection respiratoire doit être fondé sur les niveaux d'expositions prévus ou connus, les dangers du produit et les limites d'utilisation sans danger de l'appareil de protection respiratoire retenu.

Contrôle de l'exposition de l'environnement : Maintenir les niveaux sous les seuils de la protection environnementale de la communauté.

Autres renseignements : Ne pas manger, fumer ou boire là où la substance est manipulée, traitée ou entreposée. Se laver les mains minutieusement avant de manger ou de fumer. À manipuler selon les pratiques de sécurité et d'hygiène industrielles établies.

RUBRIQUE 9 : Propriétés physiques et chimiques

9.1. Informations sur les propriétés physiques et chimiques de base

État physique	:	Liquide
Apparence	:	Liquide clair
Couleur	:	Limpide / Incolore
Odeur	:	Légère odeur d'alcool
Seuil olfactif	:	Aucune donnée disponible
pH	:	Aucune donnée disponible
Point de fusion	:	Aucune donnée disponible
Point de congélation	:	Aucune donnée disponible
Point d'ébullition	:	Aucune donnée disponible
Point d'éclair	:	28 °C (82,4 °F) (50% alcool méthylique/eau, v/v)
Vitesse d'évaporation relative (acétate de butyle=1)	:	Aucune donnée disponible
Inflammabilité (solide, gaz)	:	Inflammable
Limites d'explosivité	:	Aucune donnée disponible
Propriétés explosives	:	Aucune donnée disponible
Propriétés comburantes	:	Aucune donnée disponible
Pression de la vapeur	:	Aucune donnée disponible
Densité relative	:	0,925 g/mL
Densité relative de la vapeur à 20 °C	:	Aucune donnée disponible
Solubilité	:	Aucune donnée disponible
Coefficient de répartition n-octanol/eau	:	Aucune donnée disponible
Température d'auto-inflammation	:	Aucune donnée disponible
Température de décomposition	:	Aucune donnée disponible

Viscosité	:	Aucune donnée disponible
Viscosité, cinématique	:	Aucune donnée disponible
Viscosité, dynamique	:	Aucune donnée disponible

9.2. Autres renseignements

Aucune information complémentaire disponible

RUBRIQUE 10 : Stabilité et réactivité

10.1. Réactivité

Aucune, dans les conditions normales d'utilisation.

10.2. Stabilité chimique

Stable, dans les conditions normales d'entreposage. Peut former des mélanges vapeur-air inflammables/explosifs.

10.3. Possibilité de réactions dangereuses

Aucune, dans les conditions normales d'utilisation.

10.4. Conditions à éviter

Chaleur. Matériaux incompatibles. Sources d'inflammation.

10.5. Matières incompatibles

Humidité. Acides. Chlorures d'acides. Anhydrides d'acides. Agent oxydant. Métaux alcalins. Agents réducteurs.

10.6. Produits de décomposition dangereux

Peut inclure, sans s'y limiter : les oxydes de carbone. Peut libérer des gaz inflammables.

RUBRIQUE 11 : Données toxicologiques

11.1. Informations sur les effets toxicologiques

Toxicité aiguë : Toxique en cas d'ingestion, par contact cutané et par inhalation.

CRM-MCLR	
DL50 orale rat	> 50 mais ≤ 300 mg/kg (calculée en utilisant les valeurs ETA)
DL50 cutanée lapin	> 200 mais ≤ 1000 mg/kg (calculée en utilisant les valeurs ETA)
CL50 inhalation rat	> 2 mais ≤ 10 mg/L/4h (calculée en utilisant les valeurs ETA)

Alcool méthylique (67-56-1)	
DL50 orale rat	6200 mg/kg
CL50 inhalation rat	22500 ppm/8h

Microcystine-LR (101043-37-2)	
DL50 intrapéritonéale, souris	11,0 µg/kg

Corrosion cutanée/irritation cutanée : Compte tenu des données disponibles, les critères de classification ne sont pas remplis

Lésions oculaires graves/irritation oculaire : Provoque une sévère irritation des yeux.

Sensibilisation respiratoire ou cutanée : Compte tenu des données disponibles, les critères de classification ne sont pas remplis

Mutagénicité sur les cellules germinales : Compte tenu des données disponibles, les critères de classification ne sont pas remplis

Cancérogénicité : Compte tenu des données disponibles, les critères de classification ne sont pas remplis

Microcystine-LR (101043-37-2)	
Groupe IARC	2B - Peut-être cancérogène pour l'homme

Toxicité pour la reproduction	:	Peut nuire à la fertilité ou au fœtus.
Toxicité spécifique pour certains organes cibles (exposition unique)	:	Peut provoquer somnolence ou vertiges. Risque avéré d'effets graves pour les organes.
Toxicité spécifique pour certains organes cibles (exposition répétée)	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Danger par aspiration	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Symptômes/lésions après inhalation	:	Toxique par inhalation. Peut causer l'irritation des voies respiratoires. Des vapeurs peuvent causer des narcoses, des maux de tête, une respiration difficile, des étourdissements, de la somnolence, une perte de conscience et même la mort.
Symptômes/lésions après contact avec la peau	:	Toxique par contact cutané. Peut irriter la peau. Les symptômes peuvent inclure des rougeurs, des dessèchements, une délipidation et une gerçure de la peau. Les autres symptômes sont similaires à ceux qui apparaissent dans les cas d'inhalation et d'ingestion.
Symptômes/lésions après contact oculaire	:	Provoque une sévère irritation des yeux. Les symptômes peuvent inclure un inconfort ou des douleurs, un clignement excessif des paupières et une production excessive de larmes, avec une rougeur prononcée et un gonflement de la conjonctive.
Symptômes/lésions après ingestion	:	Toxique en cas d'ingestion. Peut être mortel ou causer la cécité si avalé. Le produit contient du méthanol qui, à l'ingestion, peut provoquer une acidose et des atteintes oculaires allant d'une diminution de la capacité visuelle à la cécité totale, et même à la mort. Peut causer un malaise gastro-intestinal, des nausées ou des vomissements. L'ingestion peut causer des maux de tête, des vertiges, de la somnolence, une acidose métabolique, un coma, ou des crises convulsives. Si ingéré en grande quantité, les microcystines causent des maladies gastro-intestinales et hépatiques.
Autres symptômes	:	La toxicité des microcystines fait toujours l'objet d'une enquête. Les microcystines sont essentiellement composées d'hépatoxines, et les expériences effectuées sur des animaux ont démontré des lésions hépatiques chroniques au cours d'une exposition continue par voie orale. Les études sur les animaux ont suggéré la promotion de tumeurs.

RUBRIQUE 12 : Données écologiques

12.1. Toxicité

Écologie - général : Peut entraîner des effets néfastes à long terme pour l'environnement aquatique.

12.2. Persistance et dégradabilité

CRM-MCLR	
Persistance et dégradabilité	Non établi.

12.3. Potentiel de bioaccumulation

CRM-MCLR	
Potentiel de bioaccumulation	Non établi.

12.4. Mobilité dans le sol

Aucune information complémentaire disponible

12.5. Autres effets néfastes

Aucune information complémentaire disponible

RUBRIQUE 13 : Données sur l'élimination

13.1. Méthodes de traitement des déchets

Recommandations pour l'élimination des déchets : Ces matériaux doivent être éliminés dans le respect de toutes les réglementations locales, régionales, provinciales et fédérales. Il est recommandé d'éviter ou réduire autant que possible la production de déchets.

Indications complémentaires : Manipuler les conteneurs vides avec précaution, les vapeurs résiduelles étant inflammables.

RUBRIQUE 14 : Informations relatives au transport

Department of Transportation (DOT) et Transport des marchandises dangereuses (TMD)

Conformément aux exigences du DOT et TMD

N° ONU (DOT/TMD) : UN1986

Désignation officielle pour le transport (DOT/TMD) : Alcools inflammables, toxiques, n.s.a. (solution de méthanol)

Classe (DOT/TMD) : 3 (6.1)

Étiquettes de danger (DOT/TMD) :

Groupe d'emballage (DOT/TMD) : III

Indications complémentaires

Autres renseignements : Aucune information supplémentaire disponible

Mesures de précautions pour le transport : Ne pas manipuler avant d'avoir lu et compris toutes les précautions de sécurité.

RUBRIQUE 15 : Informations sur la réglementation

15.1. Réglementations fédérales

Tous les composants de ce produit figurent à l'inventaire de la *Toxic Substances Control Act* (TSCA) de l'Environmental Protection Agency des États-Unis (ou en sont exclus), sauf :

Microcystine-LR	n° CAS 101043-37-2

Tous les composants de ce produit figurent aux inventaires canadiens LIS (Liste intérieure des substances) et LES (Liste extérieure des substances) (ou en sont exclus), sauf :

Microcystine-LR	n° CAS 101043-37-2

Alcool méthylique (67-56-1)	
Soumis aux exigences de déclaration de la Loi SARA Section 313 des États-Unis	
Loi SARA Section 313, États-Unis – Déclaration des émissions	1,0 %

15.2. Réglementation des États – É.-U.

Aucune information complémentaire disponible

RUBRIQUE 16 : Autres renseignements

Date d'émission : 2016-06-17

Date de révision : 2016-06-17

Version : 1,0

Préparé par : Nexreg Compliance Inc.

Avis de non-responsabilité :

Les renseignements contenus dans la présente fiche signalétique ont été établis sur la base de nos connaissances à la date de sa publication. Ils sont fournis uniquement à titre indicatif pour permettre la manipulation, la fabrication, le stockage, le transport, la distribution, la mise à disposition, l'utilisation et l'élimination dudit produit dans des conditions satisfaisantes de sécurité, et ne sauraient donc être interprétés comme une garantie ou considérés comme des spécifications de qualité. Les renseignements ne concernent en outre que le produit nommément désigné et, sauf indication contraire fournie dans la fiche, peuvent ne pas être applicables au mélange dudit produit avec d'autres substances ni être utilisables dans tout autre procédé.

Ce produit est uniquement conçu dans le but de servir dans le cadre de travaux de recherche ou d'expériences. Il ne doit pas être utilisé à des fins alimentaires, thérapeutiques, ménagères, agricoles ou esthétiques. Il doit être utilisé sous la supervision d'un personnel technique qualifié et disposant d'une expérience pratique de la manipulation de substances chimiques potentiellement dangereuses. Outre le solvant contenu dans ce produit (le cas échéant), les autres substances dangereuses dans la solution présentent des concentrations si faibles que la détermination exacte du degré de danger qu'elles pourraient poser n'est pas justifiée et pourrait même s'avérer trompeuse. Enfin, nous ne pouvons être tenus responsables des dommages qui pourraient résulter de la manipulation de ce produit ou d'un contact avec celui-ci.

Le texte anglais est la version définitive de ce document

CRM-STX-g

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 2021-03-24 Revision date: 2021-03-24 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture

Product name : CRM-STX-g

Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Certified Calibration Solution for Saxitoxin Dihydrochloride, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1411 Oxford Street
Halifax, Nova Scotia, Canada B3H 3Z1
T 1-902-426-8281

National Research Council Canada Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Not classified

2.2. Label elements

GHS labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (by weight)
Water	(CAS-No.) 7732-18-5	99.99
Saxitoxin Dihydrochloride	(CAS-No.) 35554-08-6	0.0023
Hydrochloric acid	(CAS-No.) 7647-01-0	0.0018

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting. If sufficient quantities are ingested, Saxitoxin Dihydrochloride causes paresthesia (numbness), paralysis, respiratory arrest.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed.

Storage temperature : +4 °C / +39.2 °F

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrochloric acid (7647-01-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL C [ppm]	2 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - OSHA - Occupational Exposure Limits	
OSHA PEL C	7 mg/m³
OSHA PEL C [ppm]	5 ppm
USA - IDLH - Occupational Exposure Limits	
IDLH [ppm]	50 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL C	7 mg/m³
NIOSH REL C [ppm]	5 ppm

Saxitoxin Dihydrochloride (35554-08-6)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Wear suitable gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Avoid release to the environment.

Other information : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear colourless liquid
Colour	:	Colourless
Odour	:	None
Odour threshold	:	No data available
pH	:	3
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not flammable
Vapour pressure	:	No data available
Relative vapour density at 20 °C / 68 °F	:	No data available
Relative density	:	No data available
Density	:	1 g/mL
Solubility	:	No data available
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Metals. Bases. Amines. Oxides. Carbonates. Cyanides. Sulfides. Sulfites. Formaldehyde.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Water (7732-18-5)	
LD50 oral rat	> 90 mL/kg

Hydrochloric acid (7647-01-0)	
LD50 oral rat	238 – 277 mg/kg
LD50 dermal rabbit	> 5010 mg/kg
LC50 inhalation rat	1.68 mg/L (Exposure time: 1 h)

Saxitoxin Dihydrochloride (35554-08-6)	
LD50 oral mouse	0.263 mg/kg

Skin corrosion/irritation : Not classified
pH: 3
Serious eye damage/irritation : Not classified
pH: 3
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Hydrochloric acid (7647-01-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting. If sufficient quantities are ingested, Saxitoxin Dihydrochloride causes paresthesia (numbness), paralysis, respiratory arrest.
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

CRM-STX-g	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CRM-STX-g	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Saxitoxin Dihydrochloride	CAS-No. 35554-08-6

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Saxitoxin Dihydrochloride	CAS-No. 35554-08-6

Hydrochloric acid (7647-01-0)	
Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb (gas only)
SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

15.2 US State regulations

No additional information available

SECTION 16: Other information

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Version #	: 1.0
Prepared by	: Nexreg Compliance Inc.

DISCLAIMER:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.

CRM-CYN

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2016-07-18 Revision date: 2016-07-18 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : CRM-CYN

Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Certified Calibration Solution for Cylindrospermopsin, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1411 Oxford Street
Halifax, Nova Scotia, Canada B3H 3Z1
T 1-902-426-8281

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Not classified

2.2. Label elements

GHS labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Cylindrospermopsin (CYN)	(CAS No) 143545-90-8	0.0012

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	:	May cause respiratory tract irritation.
Symptoms/injuries after skin contact	:	May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
Other symptoms	:	The toxicological properties of Cylindrospermopsin (CYN) have not been thoroughly investigated. If sufficient quantities are ingested, Cylindrospermopsin (CYN) can cause nausea, vomiting, diarrhea, abdominal tenderness, pain and acute liver failure.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Treat for surrounding material.
Unsuitable extinguishing media	:	None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting	:	Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment	:	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up	:	Scoop up material and place in a disposal container.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/ vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.
Hygiene measures	:	Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep out of the reach of children. Keep container tightly closed. Store in the dark in a fridge (+4°C / 49.2°F). Solutions are also stable when stored in a good freezer, one that does not undergo a periodic freeze-thaw cycle (preferably < -20°C / -4°F).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cylindrospermopsin (CYN) (143545-90-8)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear suitable gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear, colourless liquid

Colour : Colourless

Odour : No odour

Odour threshold : No data available

pH : 7

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Not flammable

Explosive limits : No data available

Explosive properties : No data available

Oxidising properties : No data available

Vapour pressure : No data available

Relative density : 1 g/mL

Relative vapour density at 20 °C : No data available

Solubility : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Light sensitive - keep out of direct sunlight.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

CRM-CYN	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 20 mg/l/4h

Cylindrospermopsin (CYN) (143545-90-8)	
LD50 intraperitoneal, mouse	2100 µg/kg

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met
Serious eye damage/irritation	:	Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	:	Based on available data, the classification criteria are not met
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met
Carcinogenicity	:	Based on available data, the classification criteria are not met
Reproductive toxicity	:	Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	:	Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met
Aspiration hazard	:	Based on available data, the classification criteria are not met
Symptoms/injuries after inhalation	:	May cause respiratory tract irritation.
Symptoms/injuries after skin contact	:	May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Other symptoms : The toxicological properties of Cylindrospermopsin (CYN) have not been thoroughly investigated. If sufficient quantities are ingested, Cylindrospermopsin (CYN) can cause nausea, vomiting, diarrhea, abdominal tenderness, pain and acute liver failure.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

CRM-CYN	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CRM-CYN	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Cylindrospermopsin (CYN)	CAS No 143545-90-8

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories, except for:

Cylindrospermopsin (CYN)	CAS No 143545-90-8

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue	: 2016-07-18
Revision date	: 2016-07-18
Version #	: 1.0
Prepared by	: Nexreg Compliance Inc.

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This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.

CRM-CYN

Fiche de données de sécurité

selon la norme sur la communication de risques (Hazard Communication Standard, CRF29 1910.1200) HazCom 2012 et selon le Règlement sur les produits dangereux (RPD) du SIMDUT 2015

Date d'émission : 2016-07-18 Date de révision : 2016-07-18 Version : 1,0

SECTION 1 : Identification

1.1. Identificateur de produit

Nom du produit : CRM-CYN

Code du produit : Non disponible

1.2. Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées

Utilisation de la substance/mélange : Solution d'étalonnage certifiée pour la cylindrospermopsine, pour utilisation en laboratoire seulement

1.3. Renseignements concernant le fournisseur de la fiche de données de sécurité

Conseil national de recherches Canada
1411, rue Oxford
Halifax (Nouvelle-Écosse), Canada, B3H 3Z1
T 1-902-426-8281

Conseil national de recherches Canada | National Research Council Canada

1.4. Numéro d'appel d'urgence

Numéro d'urgence : CANUTEC 1-613-996-6666

SECTION 2 : Identification des dangers

2.1. Classification de la substance ou du mélange

Classification GHS

Non classé

2.2. Éléments d'étiquetage

Étiquetage GHS

Étiquetage non applicable

2.3. Autres dangers

Aucune information complémentaire disponible.

2.4. Toxicité aiguë inconnue

Non applicable

SECTION 3 : Composition/information sur les ingrédients

3.1. Substance

Non applicable

3.2. Mélanges

Nom	Identificateur de produit	%
Cylindrospermopsine (CYN)	(n° CAS) 143545-90-8	0,0012

SECTION 4 : Premiers secours

4.1. Description des premiers secours

Premiers soins après inhalation : S'il y a difficulté à respirer, transporter la victime à l'extérieur et la maintenir au repos dans une position où elle peut confortablement respirer. Consulter un médecin en cas de malaise.

Premiers soins après contact avec la peau : Si l'irritation se produit, rincer immédiatement et abondamment avec de l'eau. Si une irritation cutanée se persiste, consulter un médecin.

Premiers soins après contact oculaire : En cas de contact, rincer immédiatement et abondamment avec de l'eau. Le cas échéant, retirer les lentilles de contact. Si l'irritation persiste, obtenir des soins médicaux.

Premiers soins après ingestion	:	Si le produit a été ingéré, ne PAS provoquer le vomissement à moins que ceci ait été demandé par du personnel médical. Ne jamais administrer quoi que ce soit par voie orale à une personne inconsciente. Consulter un médecin en cas de malaise.

4.2. Principaux symptômes et effets, aigus et différés

Symptômes/lésions après inhalation	:	Peut causer l'irritation des voies respiratoires.
Symptômes/lésions après contact avec la peau	:	Peut irriter la peau. Les symptômes peuvent inclure des rougeurs, des dessèchements, une délipidation et une gerçure de la peau.
Symptômes/lésions après contact oculaire	:	Peut irriter les yeux. Les symptômes peuvent inclure un inconfort ou des douleurs, un clignement excessif des paupières et une production excessive de larmes, avec une rougeur prononcée et un gonflement.
Symptômes/lésions après ingestion	:	Peut être nocif en cas d'ingestion. Peut causer un malaise gastro-intestinal, des nausées ou des vomissements.
Autres symptômes	:	Les propriétés toxicologiques de la cylindrospermopsine (CYN) n'ont pas été évaluées à fond. Si ingéré en grande quantité, la cylindrospermopsine (CYN) peut causer de la nausée, des vomissements, de la diarrhée, une sensibilité abdominale, de la douleur et de l'insuffisance hépatique aiguë.

4.3. Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Les symptômes peuvent ne pas apparaître immédiatement. En cas d'accident ou de malaise, consulter immédiatement un médecin (si possible, lui montrer l'étiquette ou la fiche signalétique).

SECTION 5 : Mesures de lutte contre l'incendie

5.1. Moyens d'extinction

Moyens d'extinction appropriés	:	Traiter pour les matériaux environnants.
Agents d'extinction non appropriés	:	Aucun connu.

5.2. Dangers particuliers résultant de la substance ou du mélange

Danger d'incendie	:	Les produits de combustion peuvent inclure, sans s'y limiter : oxydes de carbone.

5.3. Conseils aux pompiers

Protection en cas d'incendie	:	Rester en amont du vent par rapport à l'incendie. Porter un habit pare feu complet incluant un équipement de respiration (SCBA).

SECTION 6 : Mesures à prendre en cas de déversement accidentel

6.1. Précautions individuelles, équipement de protection et procédures d'urgence

Mesures générales	:	Porter les vêtements protecteurs recommandés dans la section 8. Isoler la zone de danger et interdire l'accès au personnel non protégé et non autorisé.

6.2. Méthodes et matériel de confinement et de nettoyage

Pour le confinement	:	Contenir et/ou absorber le déversement avec une substance inerte (par ex. du sable ou de la vermiculite) puis placer ensuite dans un conteneur adapté. Ne pas laisser s'écouler dans les égouts ni dans les cours d'eau. Utiliser l'équipement de protection individuelle (EPI) approprié.
Procédés de nettoyage	:	Déblayer la substance avec une pelle et la placer dans un conteneur de récupération.

6.3. Référence à d'autres sections

Voir la section 8 pour des conseils supplémentaires sur les vêtements et l'équipment de protection, et la section 13 pour d'autres conseils sur l'émination.

SECTION 7 : Manutention et stockage

7.1. Précautions à prendre pour une manipulation sans danger

Précautions à prendre pour une manipulation sans danger : Éviter le contact avec la peau et les yeux. Éviter de respirer les poussières/ fumées/gaz/brouillards/vapeurs/aérosols. Ne pas avaler. Manipuler et ouvrir le récipient avec prudence. Ne pas manger, ne pas boire et ne pas fumer pendant l'utilisation.

Mesures d'hygiène : Lessiver les vêtements contaminés avant de les réutiliser. Se laver les mains avant de manger, de boire ou de fumer.

7.2. Conditions nécessaires pour assurer la sécurité du stockage, tenant compte d'éventuelles incompatibilités

Conditions d'entreposage : Conserver hors de la portée des enfants. Maintenir le récipient fermé de manière étanche. Garder à l'obscurité dans le réfrigérateur (+4°C / 49,2°F). Les solutions sont aussi stables lorsqu'elles sont entreposées dans un bon congélateur qui n'alterne pas entre le gel et le dégel (préférablement < -20°C / -4°F).

SECTION 8 : Contrôles de l'exposition/protection individuelle

8.1. Paramètres de contrôle

Cylindrospermopsine (CYN) (143545-90-8)	
ACGIH	Sans objet
OSHA	Sans objet
IDLH	Sans objet
NIOSH	Sans objet

8.2. Contrôles de l'exposition

Contrôles techniques appropriés : Aérer/ventiler les lieux pour maintenir l'exposition aux poussières en suspension, émanations chimiques, fumée, etc, sous les limites permises.

Protection des mains : Porter des gants appropriés.

Protection oculaire : Des lunettes de sécurité ou des protecteurs oculaires sont recommandés en utilisant le produit.

Protection de la peau et du corps : Porter un vêtement de protection approprié.

Protection des voies respiratoires : En cas de ventilation insuffisante, porter un appareil respiratoire approprié. Le choix de l'appareil de protection respiratoire doit être fondé sur les niveaux d'expositions prévus ou connus, les dangers du produit et les limites d'utilisation sans danger de l'appareil de protection respiratoire retenu.

Contrôle de l'exposition de l'environnement : Maintenir les niveaux sous les seuils de la protection environnementale de la communauté.

Autres informations : Ne pas manger, fumer ou boire là où la substance est manipulée, traitée ou entreposée. Se laver les mains minutieusement avant de manger ou de fumer. À manipuler selon les pratiques de sécurité et d'hygiène industrielles établies.

SECTION 9 : Propriétés physiques et chimiques

9.1. Informations sur les propriétés physiques et chimiques de base

État physique : Liquide

Apparence : Liquide limpide et incolore

Couleur : Incolore

Odeur : Aucune odeur

Seuil olfactif : Aucune donnée disponible

pH : 7

Point de fusion	:	Aucune donnée disponible
Point de congélation	:	Aucune donnée disponible
Point d'ébullition	:	Aucune donnée disponible
Point d'éclair	:	Aucune donnée disponible
Vitesse d'évaporation relative (acétate de butyle=1)	:	Aucune donnée disponible
Inflammabilité (solide, gaz)	:	Non inflammable
Limites d'explosivité	:	Aucune donnée disponible
Propriétés explosives	:	Aucune donnée disponible
Propriétés comburantes	:	Aucune donnée disponible
Pression de la vapeur	:	Aucune donnée disponible
Densité relative	:	1 g/mL
Densité relative de la vapeur à 20 °C	:	Aucune donnée disponible
Solubilité	:	Aucune donnée disponible
Coefficient de répartition n-octanol/eau	:	Aucune donnée disponible
Température d'auto-inflammation	:	Aucune donnée disponible
Température de décomposition	:	Aucune donnée disponible
Viscosité	:	Aucune donnée disponible
Viscosité, cinématique	:	Aucune donnée disponible
Viscosité, dynamique	:	Aucune donnée disponible

9.2. Autres informations

Aucune information complémentaire disponible

SECTION 10 : Stabilité et réactivité

10.1. Réactivité

Aucune, dans les conditions normales d'utilisation.

10.2. Stabilité chimique

Stable, dans les conditions normales d'entreposage. Sensible à la lumière - conserver à l'abri des rayons solaires directs.

10.3. Possibilité de réactions dangereuses

Aucune, dans les conditions normales d'utilisation.

10.4. Conditions à éviter

Chaleur. Matériaux incompatibles. Rayons directs du soleil.

10.5. Matières incompatibles

Oxydants puissants.

10.6. Produits de décomposition dangereux

Peut inclure, sans s'y limiter : les oxydes de carbone.

SECTION 11 : Données toxicologiques

11.1. Informations sur les effets toxicologiques

Toxicité aiguë : Non classé

CRM-CYN	
DL50 orale rat	> 2000 mg/kg
DL50 cutanée lapin	> 2000 mg/kg
CL50 inhalation rat	> 20 mg/l/4h

Cylindrospermopsine (CYN) (143545-90-8)	
DL50 intrapéritonéale, souris	2100 µg/kg

Corrosion cutanée/irritation cutanée	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Lésions oculaires graves/irritation oculaire	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Sensibilisation respiratoire ou cutanée	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Mutagénicité sur les cellules germinales	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Cancérogénicité	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Toxicité pour la reproduction	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Toxicité spécifique pour certains organes cibles (exposition unique)	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Toxicité spécifique pour certains organes cibles (exposition répétée)	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Danger par aspiration	:	Compte tenu des données disponibles, les critères de classification ne sont pas remplis
Symptômes/lésions après inhalation	:	Peut causer l'irritation des voies respiratoires.
Symptômes/lésions après contact avec la peau	:	Peut irriter la peau. Les symptômes peuvent inclure des rougeurs, des dessèchements, une délipidation et une gerçure de la peau.
Symptômes/lésions après contact oculaire	:	Peut irriter les yeux. Les symptômes peuvent inclure un inconfort ou des douleurs, un clignement excessif des paupières et une production excessive de larmes, avec une rougeur prononcée et un gonflement.
Symptômes/lésions après ingestion	:	Peut être nocif en cas d'ingestion. Peut causer un malaise gastro-intestinal, des nausées ou des vomissements.
Autres symptômes	:	Les propriétés toxicologiques de la cylindrospermopsine (CYN) n'ont pas été évaluées à fond. Si ingéré en grande quantité, la cylindrospermopsine (CYN) peut causer de la nausée, des vomissements, de la diarrhée, une sensibilité abdominale, de la douleur et de l'insuffisance hépatique aiguë.

SECTION 12 : Données écologiques

12.1. Toxicité

Écologie - général : Peut entraîner des effets néfastes à long terme pour l'environnement aquatique.

12.2. Persistance et dégradabilité

CRM-CYN	
Persistance et dégradabilité	Non établi.

12.3. Potentiel de bioaccumulation

CRM-CYN	
Potentiel de bioaccumulation	Non établi.

12.4. Mobilité dans le sol

Aucune information complémentaire disponible

12.5. Autres effets néfastes

Aucune information complémentaire disponible

SECTION 13 : Données sur l'élimination

13.1. Méthodes de traitement des déchets

Recommandations relatives à l'élimination du produit ou de l'emballage : Ces matériaux doivent être éliminés dans le respect de toutes les réglementations locales, régionales, provinciales et fédérales. Il est recommandé d'éviter ou réduire autant que possible la production de déchets.

SECTION 14 : Informations relatives au transport

Department of Transportation (DOT) et Transport des marchandises dangereuses (TMD)

Conformément aux exigences du DOT et TMD

Non réglementé pour le transport

Indications complémentaires

Autres informations : Aucune information supplémentaire disponible.

Mesures de précautions pour le transport : Ne pas manipuler avant d'avoir lu et compris toutes les précautions de sécurité.

SECTION 15 : Informations sur la réglementation

15.1. Réglementations fédérales

Tous les composants de ce produit figurent à l'inventaire de la Toxic Substances Control Act (TSCA) de l'Environmental Protection Agency des États-Unis (ou en sont exclus), sauf :

Cylindrospermopsine (CYN)	n° CAS 143545-90-8

Tous les composants de ce produit figurent aux inventaires canadiens LIS (Liste intérieure des substances) et LES (Liste extérieure des substances) (ou en sont exclus), sauf :

Cylindrospermopsine (CYN)	n° CAS 143545-90-8

15.2. Réglementation des États – É.-U.

Aucune information complémentaire disponible

SECTION 16 : Autres informations

Date d'émission : 2016-07-18

Date de révision : 2016-07-18

Version : 1,0

Préparé par : Nexreg Compliance Inc.

Avis de non-responsabilité :

Les renseignements contenus dans la présente fiche signalétique ont été établis sur la base de nos connaissances à la date de sa publication. Ils sont fournis uniquement à titre indicatif pour permettre la manipulation, la fabrication, le stockage, le transport, la distribution, la mise à disposition, l'utilisation et l'élimination dudit produit dans des conditions satisfaisantes de sécurité, et ne sauraient donc être interprétés comme une garantie ou considérés comme des spécifications de qualité. Les renseignements ne concernent en outre que le produit nommément désigné et, sauf indication contraire fournie dans la fiche, peuvent ne pas être applicables au mélange dudit produit avec d'autres substances ni être utilisables dans tout autre procédé.

Ce produit est uniquement conçu dans le but de servir dans le cadre de travaux de recherche ou d'expériences. Il ne doit pas être utilisé à des fins alimentaires, thérapeutiques, ménagères, agricoles ou esthétiques. Il doit être utilisé sous la supervision d'un personnel technique qualifié et disposant d'une expérience pratique de la manipulation de substances chimiques potentiellement dangereuses. Outre le solvant contenu dans ce produit (le cas échéant), les autres substances dangereuses dans la solution présentent des concentrations si faibles que la détermination exacte du degré de danger qu'elles pourraient poser n'est pas justifiée et pourrait même s'avérer trompeuse. Enfin, nous ne pouvons être tenus responsables des dommages qui pourraient résulter de la manipulation de ce produit ou d'un contact avec celui-ci.

Le texte anglais est la version définitive de ce document

CRM-ATX

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2016-06-17 Revision date: 2016-06-17 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : CRM-ATX

Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Certified Calibration Solution for Anatoxin-a, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1411 Oxford Street
Halifax, Nova Scotia, Canada B3H 3Z1
T 1-902-426-8281

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Flammable Liquid 4
Acute Toxicity 4 (Oral)
Reproductive Toxicity 1B
Specific Target Organ Toxicity After Single Exposure 1

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :

GHS07 GHS08

Signal word (GHS) : Danger

Hazard statements (GHS) : Combustible liquid. Harmful if swallowed. May damage fertility or the unborn child. Causes damage to organs.

Precautionary statements (GHS) : Keep away from flames and hot surfaces. – No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. If exposed or concerned: Get medical advice/attention. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Methyl alcohol	(CAS No) 67-56-1	7.24
Acetic acid	(CAS No) 64-19-7	0.0107
Anatoxin-a (ATX-a)	(CAS No) 64285-06-9	0.0005

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting. If sufficient quantities are ingested, Anatoxin-a (ATX-a) can cause limp paralysis leading to dyspnea, cyanosis, and cardiac arrhythmia leading to death.

Other symptoms : The toxicological properties of ATX-a are under study.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam, dry powder, carbon dioxide, water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid. Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate sources of ignition. Use special care to avoid static electric charges. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep locked up and out of reach of children. Keep container tightly closed and in a well-ventilated place. Keep cool. Store in the dark in a freezer (preferably < - 20°C / <-4°F).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methyl alcohol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
IDLH	US IDLH (ppm)	6000 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm

Acetic acid (64-19-7)		
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	ACGIH STEL (ppm)	15 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	25 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
IDLH	US IDLH (ppm)	50 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	25 mg/m³

Acetic acid (64-19-7)		
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	37 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm

Anatoxin-a (ATX-a) (64285-06-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear protective gloves.

Eye protection : Wear eye/face protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear / Colorless

Colour : Colorless

Odour : Slight alcohol or vinegar

Odour threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : 64 °C (147.2 ° F) (9% methanol/water, v/v)

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Flammable

Explosive limits : No data available

Explosive properties : No data available

Oxidising properties : No data available

Vapour pressure : No data available

Relative density : 0.985 g/mL

Relative vapour density at 20 °C : No data available

Solubility : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Moisture, acids, acid chlorides, acid anhydrides, oxidizing agent, alkali metals, reducing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

CRM-ATX	
LD50 oral rat	> 300 but ≤ 2000 mg/kg (Calculated using ATE values)
LD50 dermal rabbit	> 2000 mg/kg (Calculated using ATE values)
LC50 inhalation rat	> 20 mg/L/4h (Calculated using ATE values)

Methyl alcohol (67-56-1)	
LD50 oral rat	6200 mg/kg
LC50 inhalation rat	22500 ppm/8h

Acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg
LD50 dermal rabbit	1060 mg/kg
LC50 inhalation rat	11.4 mg/L/4h

Anatoxin-a (ATX-a) (64285-06-9)	
LD50 intraperitoneal mouse	250 µg/kg

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	:	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met.
Carcinogenicity	:	Based on available data, the classification criteria are not met.
Reproductive toxicity	:	May damage fertility or the unborn child.

Specific target organ toxicity (single exposure)	:	Causes damage to organs.
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met.
Aspiration hazard	:	Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	:	May cause respiratory tract irritation.
Symptoms/injuries after skin contact	:	May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	:	Harmful if swallowed. May cause stomach distress, nausea or vomiting. If sufficient quantities are ingested, Anatoxin-a (ATX-a) can cause limp paralysis leading to dyspnea, cyanosis, and cardiac arrhythmia leading to death.
Other symptoms	:	The toxicological properties of ATX-a are under study.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

CRM-ATX	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CRM-ATX	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	:	This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.
Additional information	:	Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated for transport

Additional information

Other information	:	No supplementary information available.
Special transport precautions	:	Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Anatoxin-a (ATX-a)	CAS No 64285-06-9

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Anatoxin-a (ATX-a)	CAS No 64285-06-9

Methyl alcohol (67-56-1)	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue	:	2016-06-17
Revision date	:	2016-06-17
Version #	:	1.0
Prepared by	:	Nexreg Compliance Inc.

DISCLAIMER:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety Data Sheet

Section 1: Product and Company Identification

1.1 Product Identifiers:
Product Name: ABRAXIS® Microcystin LF Standard
Product Code: 300646
1.2 Identified Use: Positive control for determination of Microcystin LF in samples. **Restrictions on Use:** For research use only.
1.3 Company: Gold Standard Diagnostics**,** 124 Railroad Drive**,** Warminster, PA 18974 USA**,** info.abraxis@us.goldstandarddiagnostics.com
+1(215) 357-3911, FAX +1(215) 357-5232
1.4 Emergency Telephone Number: +1(215) 357-3911

Section 2: Hazard(s) Identification

2.1 Classification of the substance:
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225 Highly flammable liquid and vapor
Acute toxicity, Oral (Category 2), H300 Fatal if swallowed; Acute toxicity, Oral (Category 3), H301 Toxic if swallowed
Acute toxicity, Inhalation (Category 3), H331 Toxic if inhaled
Acute toxicity, Dermal (Category 2), H310 Fatal in contact with skin; Acute toxicity, Dermal (Category 3), H311 Toxic in contact with skin
Skin irritation (Category 2), H315 Causes skin irritation
Eye irritation (Category 2A), H319 Causes serious eye irritation
Skin sensitization (Category 1), H317 May cause an allergic skin reaction
Specific target organ toxicity - single exposure (Category 3), H335 Respiratory system; Specific target organ toxicity - single exposure (Category 1), H370 Causes damage to organs
HMIS Rating: Health hazard: 2, Chronic Health Hazard: *, Flammability: 3, Physical Hazard 0
NFPA Rating: Health hazard: 2, Fire Hazard: 3, Reactivity Hazard: 0
2.2 GHS Label elements, including precautionary statements:
Pictogram(s)

Signal word: Danger
Hazard statement(s):
H225 Highly flammable liquid and vapor.
H300 + H310 Fatal if swallowed or in contact with skin
H301 + H311 + H331 Toxic if swallowed, in contact with skin, or if inhaled
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H370 Causes damage to organs.
Precautionary statement(s):
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/eye protection/face protection.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continue rinsing.
P307 + P311 If exposed: Call a POISON CENTER or doctor/physician.
P310 Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.
P361 Remove/Take off immediately all contaminated clothing.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233 + P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None known.
2.4 Unknown acute toxicity: None known.

Section 3: Composition / Information on Ingredients

3.1 Substances:
Name and Synonym(s): Microcystin LF, MCY LF Formula: $C_{52}H_{71}N_7O_{12}$
Molecular weight: 986.16 g/mol CAS No.: 154037-70-4
Classification: Acute Toxicity 2; Skin Irritation 2; Eye Irritation 2A; Skin Sensitization 1; STOT SE 3; H300 + H310 + H330, H315, H317, H319, H335
Percentage: *less than or equal to 0.000001 %*
Hazardous component(s):
Name and Synonym(s): Methyl alcohol, MeOH, Methanol Formula: CH_4O Molecular weight: 32.04 g/mol
CAS No.: 67-56-1 EC-No.: 200-659-6
Classification: Flammable Liquid 2, Acute Toxicity 3; STOT SE 1; H225, H301 + H311 + H331, H370
Percentage in Mixture: ~100 %
For full text of H-Statements mentioned in this Section, see Section 2.

Section 4: First Aid Measures

4.1 Description of first aid measures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed: No data available. Treat symptomatically.

Section 5: Fire-fighting Measures

5.1 Suitable extinguishing media: Dry powder or sand **Unsuitable extinguishing media:** Do NOT use water jet
5.2 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides
5.3 Advice for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary, and full protective gear to prevent contact with skin and eyes.
5.4 Further information: Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment (see section 8). Avoid dust formation. Avoid breathing vapors, mist, dust, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up: Contain spillage. Solids (if applicable): Pick up and arrange disposal without creating dust. Sweep up and shovel. Liquids (if applicable): Absorb with non-combustible liquid-binding material (sand, earth, diatomite, vermiculite). Keep in suitable, closed containers for disposal.
6.4 Reference to other sections: For information on safe handling see section 7.
For information on personal protection see section 8.
For information on disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling: See section 2. Avoid inhalation of vapors or mist, and avoid contact with skin and eyes. Wear appropriate personal protective equipment. Use explosion-proof equipment. Keep away from sources of ignition. Do not eat, drink, or smoke in work area. Take measures to prevent the buildup of electrostatic charge.
7.2 Precautions for safe storage: Keep container(s) tightly closed in a dry, well-ventilated place. Protect from physical damage. Opened containers must be carefully resealed and kept upright to prevent leakage. See label or product insert for appropriate storage temperature and additional specific information. Storage class (TRGS 510): Flammable liquids.
7.3 Specific end use(s): Other than use(s) specified in section 1, no other uses are stipulated.

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:

Component(s) with workplace control parameters

Methanol, CAS No. 67-56-1

Value	Control parameters	Basis
TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250.000000 ppm; 325.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
TWA	200 ppm; 260 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250 ppm; 325 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200 ppm; 260 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
STEL	250 ppm; 325 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		
TWA	200 ppm; 260 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		

Biological occupational exposure limits

Methanol, CAS No. 67-56-1

Parameters	Value	Biological specimen	Basis
Methanol	15.0000 mg/l	Urine	ACGIH – Biological Exposure Indices (BEI)
End of shift (As soon as possible after exposure ceases)			

Derived No Effect Level (DNEL)

Methanol, CAS No. 67-56-1

Application area	Exposure routes	Health effect	Value
Workers	Skin contact	Long-term systemic effects, Acute systemic effects	40mg/kg BW/d
Consumers	Skin contact	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d
Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	260 mg/m³
Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	50 mg/m³

Predicted No Effect Concentration (PNEC)
Methanol, CAS No. 67-56-1

Compartment	Value
Soil	23.5 mg/kg
Marine water	15.4 mg/l
Fresh water	154 mg/l
Fresh water sediment	570.4 mg/kg
Onsite sewage treatment plant	100 mg/kg

8.2 Exposure controls:
Appropriate engineering controls: Provide adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from food and beverages.
Personal protective equipment
Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection: Handle with chemical resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory protection: Use a chemical fume hood or approved respiratory protection equipment.
Body protection: Lightweight, protective clothing to prevent skin exposure.
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties of mixture
Appearance: Liquid **Odor:** No data available **Odor Threshold:** No data available
pH: No data available **Melting point/freezing point:** No data available
Initial boiling point and boiling range: No data available **Flash point:** No data available
Evaporation rate: No data available **Flammability (solid, gas):** No data available
Upper/lower flammability or explosive limits No data available **Vapor pressure:** No data available
Vapor density: No data available **Relative density:** No data available
Water solubility: No data available **Partition coefficient: n-octanol/water:** No data available
Auto-ignition temperature: Not applicable **Decomposition temperature:** No data available
Viscosity: No data available **Explosive properties:** No data available **Oxidizing properties:** No data available
9.2 Other information: No data available

Section 10: Stability and Reactivity

10.1 Reactivity: No data available
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: No data available
10.4 Conditions to avoid: Keep away from open flame, hot surfaces, heat sources, and sources of ignition.
10.5 Incompatible materials: Acid chlorides, acid anhydrides, strong oxidizing agents, alkali metals, reducing agents, acids, peroxides
10.6 Hazardous decomposition products: No data available. In the event of fire: see section 5.

Section 11: Toxicological Information

11.1 Information on toxicological effects
To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.
Acute toxicity: (Microcystin LF, CAS No. 154037-70-4)
Inhalation No data available **Ingestion** No data available **Skin contact** Irritant to skin and mucous membranes
Eye contact Irritating effect **Respiratory or skin sensitization** Sensitization possible through skin contact
Aspiration hazard No data available **Additional toxicological information** Danger through skin adsorption
Acute toxicity (Methanol, CAS No. 67-56-1)**:**
Inhalation LC50 Inhalation - Rat - 4 h - 128.2 mg/l; LC50 Inhalation - Rat - 6 h - 87.6 mg/l; LD50 Dermal - Rabbit - 17,100 mg/kg
Ingestion LDLO Oral - Human - 143 mg/kg (Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea); LD50 Oral - Rat - 1,187 - 2,769 mg/kg
Skin contact Rabbit skin—no irritation **Eye contact** Rabbit eye—no irritation
Respiratory or skin sensitization Maximization Test (GPMT)(OECD Test Guideline 406)--Guinea pig--does not cause skin sensitization **Aspiration hazard** No data available
Mutagenicity (Methanol, CAS No. 67-56-1)**:** Ames test (*S. typhimurium*)--Result: negative; *in vitro* assay (fibroblasts)--Result: negative; *in vivo* mammalian bone-marrow cytogenetic test, chromosomal analysis (mouse, male and female)--Result: negative
Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Teratogenicity: No data available **Reproductive/fertility toxicity:** Damage to fetus not classifiable
Specific target organ toxicity, single exposure: (Methanol, CAS No. 67-56-1)**:** Causes damage to organs
Specific target organ toxicity, repeated exposure: No data available
Additional information: (Methanol, CAS No. 67-56-1): RTECS: PC1400000 Effects due to ingestion may include headache, dizziness, drowsiness, metabolic acidosis, coma, seizures. Methanol may be fatal or cause blindness if swallowed. Stomach - Irregularities - Based on Human Evidence

Section 12: Ecological Information

12.1 Toxicity: No data available
12.2 Persistence and degradability: No data available
12.3 Bioaccumulative potential: No data available
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: No data available
12.6 Other adverse effects: Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Section 13: Disposal Considerations

13.1 Waste treatment methods
Product: All waste must be handled and disposed according to local, state, and federal regulations. Avoid disposing large volumes in sewer.
Contaminated packaging: All waste must be handled and disposed according to local, state, and federal regulations.
Refer to sections 7 and 8 for safe handling guidance.

Section 14: Transport Information

DOT, Land Transport ADR/RID (cross-border), Maritime Transport IMDG, Air Transport ICAO-TI and IATA-DGR
UN Number: 3316
UN Proper shipping name: Chemical Kit, (contains Methanol)
Transport hazard class(es): 9
Packing group: III
Environmental hazard: See section 12
Bulk transport: Excepted/Limited quantity
Special considerations: See section 7 for handling

Section 15: Regulatory Information

EU Regulations, Hazard Symbol(s): Methanol: T (Toxic), F (Flammable)
Safety Phrases: Methanol: S 7 / 16 / 36 / 37 / 45, Keep container tightly closed. Keep away from sources of ignition, no smoking. Wear suitable protective clothing and gloves. In case of accident or if you become ill, seek medical advice immediately (show product label).
SARA Title III, Section 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Title III, Section 313 Components: Methanol, CAS No. 67-56-1
SARA 311/312 Hazards: Methanol, CAS No. 67-56-1: Fire Hazard, Acute Health Hazard, Chronic Health Hazard
State Right-to-Know
Massachusetts: Methanol, CAS No. 67-56-1
Pennsylvania: Methanol, CAS No. 67-56-1
New Jersey: Methanol, CAS No. 67-56-1
California Prop. 65 Components: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Methanol, CAS No. 67-56-1

Section 16: Other information

This information is based on our present knowledge. While Gold Standard Diagnostics believes that the data contained herein are factual and the opinions expressed represent a best effort to present accurate information, the data are not to be taken as a warranty or representation for which Gold Standard Diagnostics assumes legal responsibility. The information shall not be taken as being all-inclusive and is to be used only as a guide. The data are offered solely for the user's consideration, investigation, and verification. These suggestions should not be confused with either state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.

All materials and mixtures may present unknown hazards and should be used with caution. Since Gold Standard Diagnostics cannot control the methods, volumes, or conditions of use of this product, Gold Standard Diagnostics shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. An individual technically qualified to handle potentially hazardous

chemicals must supervise the use of this material. This product is sold for research use only. It is not for any human or animal therapeutic or clinical diagnostic use.

Date this SDS is effective: 8 Jul 2021
Version: 1

Safety Data Sheet

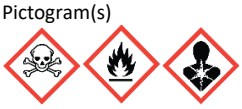
Section 1: Product and Company Identification

1.1 Product Identifiers:
Product Names: ABRAXIS® Microcystin RR Standard, ABRAXIS® Microcystin RR Certified Standard
Product Codes: 300636, 300582
1.2 Identified Use: Positive control for determination of Microcystin RR in samples. **Restrictions on Use:** For research use only.
1.3 Company: Gold Standard Diagnostics**,** 124 Railroad Drive**,** Warminster, PA 18974 USA**,** info.abraxis@us.goldstandarddiagnostics.com
+1(215) 357-3911, FAX +1(215) 357-5232
1.4 Emergency Telephone Number: +1(215) 357-3911

Section 2: Hazard(s) Identification

2.1 Classification of the mixture:
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225 Highly flammable liquid and vapor
Acute toxicity, Oral (Category 2), H300 Fatal if swallowed; Acute toxicity, Oral (Category 3), H301 Toxic if swallowed
Acute toxicity, Inhalation (Category 1), H330 Fatal if inhaled; Acute toxicity, Inhalation (Category 3), H331 Toxic if inhaled
Acute toxicity, Dermal (Category 2), H310 Fatal in contact with skin; Acute toxicity, Dermal (Category 3), H311 Toxic in contact with skin
Skin irritation (Category 2), H315 Causes skin irritation
Eye irritation (Category 2A), H319 Causes serious eye irritation
Skin sensitization (Category 1), H317 May cause an allergic skin reaction
Specific target organ toxicity - single exposure (Category 3), H335 Respiratory system; Specific target organ toxicity - single exposure (Category 1), H370 Causes damage to organs
HMIS Rating: Health hazard: 2, Chronic Health Hazard: *, Flammability: 3, Physical Hazard 0
NFPA Rating: Health hazard: 2, Fire Hazard: 3, Reactivity Hazard: 0

2.2 GHS Label elements, including precautionary statements:
Pictogram(s)



Signal word: Danger
Hazard statement(s):
H225 Highly flammable liquid and vapor.
H300 + H310 + H330 Fatal if swallowed, in contact with skin, or if inhaled
H301 + H311 + H331 Toxic if swallowed, in contact with skin, or if inhaled
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H370 Causes damage to organs.
Precautionary statement(s):
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/ gas/ mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/eye protection/face protection.
P284 Wear respiratory protection.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307 + P311 If exposed: Call a POISON CENTER or doctor/physician.
P310 Immediately call a POISON CENTER or doctor/physician.

P330 Rinse mouth.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P361 Remove/Take off immediately all contaminated clothing.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233 + P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None known.
2.4 Unknown acute toxicity: None known.

Section 3: Composition / Information on Ingredients

3.1 Substances:
Name and Synonym(s): Microcystin RR, MCY RR Formula: $C_{49}H_{75}N_{13}O_{12}$
Molecular weight: 1038.2 g/mol CAS No.: 111755-37-4
Classification: Acute Toxicity 2, Acute Toxicity 1, Acute Toxicity 2; Skin Irritation 2; Eye Irritation 2A; Skin Sensitization 1; STOT SE 3; H300 + H310 + H330, H315, H317, H319, H335
Percentage in mixture: 0.000001 %
Hazardous component(s):
Name and Synonym(s): Methyl alcohol, MeOH, Methanol Formula: CH_4O Molecular weight: 32.04 g/mol
CAS No.: 67-56-1 EC-No.: 200-659-6
Classification: Flammable Liquid 2, Acute Toxicity 3; STOT SE 1; H225, H301 + H311 + H331, H370
Percentage in Mixture: ~100 %
For full text of H-Statements mentioned in this Section, see Section 2.

Section 4: First Aid Measures

4.1 Description of first aid measures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed: No data available. Treat symptomatically.

Section 5: Fire-fighting Measures

5.1 Suitable extinguishing media: Dry powder or sand **Unsuitable extinguishing media:** Do NOT use water jet
5.2 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides
5.3 Advice for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary, and full protective gear to prevent contact with skin and eyes.
5.4 Further information: Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment (see section 8). Avoid dust formation. Avoid breathing vapors, mist, dust, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up: Contain spillage. Solids (if applicable): Pick up and arrange disposal without creating dust. Sweep up and shovel. Liquids (if applicable): Absorb with non-combustible liquid-binding material (sand, earth, diatomite, vermiculite). Keep in suitable, closed containers for disposal.
6.4 Reference to other sections: For information on safe handling see section 7.
For information on personal protection see section 8.
For information on disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling: See section 2. Avoid inhalation of vapors or mist, and avoid contact with skin and eyes. Wear appropriate personal protective equipment. Use explosion-proof equipment. Keep away from sources of ignition. Do not eat, drink, or smoke in work area. Take measures to prevent the buildup of electrostatic charge.

7.2 Precautions for safe storage: Keep container(s) tightly closed in a dry, well-ventilated place. Protect from physical damage. Opened containers must be carefully resealed and kept upright to prevent leakage. See label or product insert for appropriate storage temperature and additional specific information. Storage class (TRGS 510): Flammable liquids.
7.3 Specific end use(s): Other than use(s) specified in section 1, no other uses are stipulated.

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:
Component(s) with workplace control parameters
Methanol, CAS No. 67-56-1

Value	Control parameters	Basis
TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250.000000 ppm; 325.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
TWA	200 ppm; 260 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250 ppm; 325 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200 ppm; 260 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
STEL	250 ppm; 325 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		
TWA	200 ppm; 260 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		

Biological occupational exposure limits
Methanol, CAS No. 67-56-1

Parameters	Value	Biological specimen	Basis
Methanol	15.0000 mg/l	Urine	ACGIH – Biological Exposure Indices (BEI)
End of shift (As soon as possible after exposure ceases)			

Derived No Effect Level (DNEL)
Methanol, CAS No. 67-56-1

Application area	Exposure routes	Health effect	Value
Workers	Skin contact	Long-term systemic effects, Acute systemic effects	40mg/kg BW/d
Consumers	Skin contact	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d

Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	260 mg/m^3
Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	50 mg/m^3

Predicted No Effect Concentration (PNEC)

Methanol, CAS No. 67-56-1

Compartment	Value
Soil	23.5 mg/kg
Marine water	15.4 mg/l
Fresh water	154 mg/l
Fresh water sediment	570.4 mg/kg
Onsite sewage treatment plant	100 mg/kg

8.2 Exposure controls:

Appropriate engineering controls: Provide adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from food and beverages.

Personal protective equipment

Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with chemical resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: Use a chemical fume hood or approved respiratory protection equipment.

Body protection: Lightweight, protective clothing to prevent skin exposure.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties of mixture

Appearance: Liquid **Odor:** No data available **Odor Threshold:** No data available

pH: No data available **Melting point/freezing point:** No data available

Initial boiling point and boiling range: No data available **Flash point:** No data available

Evaporation rate: No data available **Flammability (solid, gas):** No data available

Upper/lower flammability or explosive limits No data available **Vapor pressure:** No data available

Vapor density: No data available **Relative density:** No data available

Water solubility: No data available **Partition coefficient: n-octanol/water:** No data available

Auto-ignition temperature: Not applicable **Decomposition temperature:** No data available

Viscosity: No data available **Explosive properties:** No data available **Oxidizing properties:** No data available

9.2 Other information: No data available

Section 10: Stability and Reactivity

10.1 Reactivity: No data available

10.2 Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Keep away from open flame, hot surfaces, heat sources, and sources of ignition.

10.5 Incompatible materials: Acid chlorides, acid anhydrides, strong oxidizing agents, alkali metals, reducing agents, acids, peroxides

10.6 Hazardous decomposition products: No data available. In the event of fire: see section 5.

Section 11: Toxicological Information

11.1 Information on toxicological effects

To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

Acute toxicity (Microcystin RR, CAS No. 111755-37-4)**:**

Inhalation No data available **Ingestion** No data available **Skin contact** No data available

Eye contact No data available **Respiratory or skin sensitization** No data available **Aspiration hazard** No data available

LD50 Intraperitoneal No data available

Acute toxicity (Methanol, CAS No. 67-56-1)**:**

Inhalation LC50 Inhalation - Rat - 4 h - 128.2 mg/l; LC50 Inhalation - Rat - 6 h - 87.6 mg/l; LD50 Dermal - Rabbit - 17,100 mg/kg

Ingestion LDLO Oral - Human - 143 mg/kg (Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea); LD50 Oral - Rat - 1,187 - 2,769 mg/kg

Skin contact Rabbit skin—no irritation **Eye contact** Rabbit eye—no irritation

Respiratory or skin sensitization Maximization Test (GPMT)(OECD Test Guideline 406)--Guinea pig--does not cause skin sensitization **Aspiration hazard** No data available

Mutagenicity (Methanol, CAS No. 67-56-1)**:** Ames test (*S. typhimurium*)--Result: negative; *in vitro* assay (fibroblasts)--Result: negative; *in vivo* mammalian bone-marrow cytogenetic test, chromosomal analysis (mouse, male and female)--Result: negative
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Teratogenicity: No data available **Reproductive/fertility toxicity:** Damage to fetus not classifiable
Specific target organ toxicity, single exposure: Inhalation—may cause respiratory irritation
Specific target organ toxicity, repeated exposure: No data available
Additional information: (Microcystin RR, CAS No. 111755-37-4): RTECS: Not available. Stomach - Irregularities - Based on Human Evidence. (Methanol, CAS No. 67-56-1): RTECS: PC1400000 Effects due to ingestion may include headache, dizziness, drowsiness, metabolic acidosis, coma, seizures. Methanol may be fatal or cause blindness if swallowed. Stomach - Irregularities - Based on Human Evidence

Section 12: Ecological Information

12.1 Toxicity: No data available
12.2 Persistence and degradability: No data available
12.3 Bioaccumulative potential: No data available
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: No data available
12.6 Other adverse effects: Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Section 13: Disposal Considerations

13.1 Waste treatment methods
Product: All waste must be handled and disposed according to local, state, and federal regulations. Avoid disposing large volumes in sewer.
Contaminated packaging: All waste must be handled and disposed according to local, state, and federal regulations.
Refer to sections 7 and 8 for safe handling guidance.

Section 14: Transport Information

DOT, Land Transport ADR/RID (cross-border), Maritime Transport IMDG, Air Transport ICAO-TI and IATA-DGR
UN Number: 3316
UN Proper shipping name: Chemical Kit, (contains Methanol)
Transport hazard class(es): 9
Packing group: III
Environmental hazard: See section 12
Bulk transport: Excepted/Limited quantity
Special considerations: See section 7 for handling

Section 15: Regulatory Information

EU Regulations, Hazard Symbol(s): Methanol: T (Toxic), F (Flammable)
Safety Phrases: Methanol: S 7 / 16 / 36 / 37 / 45, Keep container tightly closed. Keep away from sources of ignition, no smoking. Wear suitable protective clothing and gloves. In case of accident or if you become ill, seek medical advice immediately (show product label).
SARA Title III, Section 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Title III, Section 313 Components: Methanol, CAS No. 67-56-1
SARA 311/312 Hazards: Methanol, CAS No. 67-56-1: Fire Hazard, Acute Health Hazard, Chronic Health Hazard
State Right-to-Know
Massachusetts: Methanol, CAS No. 67-56-1
Pennsylvania: Methanol, CAS No. 67-56-1
New Jersey: Methanol, CAS No. 67-56-1
California Prop. 65 Components: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Methanol, CAS No. 67-56-1

Section 16: Other information

This information is based on our present knowledge. While Gold Standard Diagnostics believes that the data contained herein are factual and the opinions expressed represent a best effort to present accurate information, the data are not to be taken as a warranty or representation for which Gold Standard Diagnostics assumes legal responsibility. The information shall not be taken as being all-inclusive and is to be used only as a guide. The data are offered solely for the user's consideration, investigation, and verification. These suggestions should not be confused with either state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.

All materials and mixtures may present unknown hazards and should be used with caution. Since Gold Standard Diagnostics cannot control the methods, volumes, or conditions of use of this product, Gold Standard Diagnostics shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material. This product is sold for research use only. It is not for any human or animal therapeutic or clinical diagnostic use.

Date this SDS is effective: 8 Jul 2021
Version: 1

Safety Data Sheet

Section 1: Product and Company Identification

1.1 Product Identifiers:
Product Name: ABRAXIS® Microcystin YR Standard
Product Code: 300638
1.2 Identified Use: Positive control for determination of Microcystin YR in samples. **Restrictions on Use:** For research use only.
1.3 Company: Gold Standard Diagnostics**,** 124 Railroad Drive**,** Warminster, PA 18974 USA**,** info.abraxis@us.goldstandarddiagnostics.com +1(215) 357-3911, FAX+1(215) 357-5232
1.4 Emergency Telephone Number: +1(215) 357-3911

Section 2: Hazard(s) Identification

2.1 Classification of the mixture:
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225 Highly flammable liquid and vapor
Acute toxicity, Oral (Category 2), H300 Fatal if swallowed;
Acute toxicity, Oral (Category 3), H301 Toxic if swallowed
Acute toxicity, Inhalation (Category 1), H330 Fatal if inhaled;
Acute toxicity, Inhalation (Category 3), H331 Toxic if inhaled
Acute toxicity, Dermal (Category 2), H310 Fatal in contact with skin;
Acute toxicity, Dermal (Category 3), H311 Toxic in contact with skin
Skin irritation (Category 2), H315 Causes skin irritation
Eye irritation (Category 2A), H319 Causes serious eye irritation
Skin sensitization (Category 1), H317 May cause an allergic skin reaction
Specific target organ toxicity - single exposure (Category 3), H335
Respiratory system; Specific target organ toxicity - single exposure (Category1), H370 Causes damage to organs
HMIS Rating: Health hazard: 2, Chronic Health Hazard: *, Flammability: 3, Physical Hazard 0NFPA Rating: Health hazard: 2, Fire Hazard: 3, Reactivity Hazard: 0

2.2 GHS Label elements, including precautionary statements:
Pictogram(s)

Signal word: Danger Hazard statement(s):
H225 Highly flammable liquid and vapor.
H300 + H310 + H330 Fatal if swallowed, in contact with skin, or if inhaledH301 + H311 + H331 Toxic if swallowed, in contact with skin, or if inhaled
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.H319 Causes serious eye irritation.
H335 May cause respiratory irritation.H370 Causes damage to organs.
Precautionary statement(s):
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.P260 Do not breathe dust/fume/ gas/ mist/vapors/spray. P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.P280 Wear protective gloves/eye protection/face protection.
P284 Wear respiratory protection.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307 + P311 If exposed: Call a POISON CENTER or doctor/physician.P310 Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.P337 + P313 If eye irritation persists: Get medical advice/attention.
P361 Remove/Take off immediately all contaminated clothing.P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.P403 + P233 + P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool. P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None known.
2.4 Unknown acute toxicity: None known.

Section 3: Composition / Information on Ingredients

3.1 Substances:
Name and Synonym(s): Microcystin YR, MCY YR Formula: $C_{52}H_{72}N_{10}O_{13}$
Molecular weight: 1045.2 g/mol CAS No.: 101064-48-6
Classification: Acute Toxicity 2, Acute Toxicity 1, Acute Toxicity 2;
Skin Irritation 2; Eye Irritation 2A; Skin Sensitization 1; STOT SE 3; H300 + H310 + H330, H315, H317, H319, H335
Percentage in mixture: 0.000001 %Hazardous component(s):
Name and Synonym(s): Methyl alcohol, MeOH, Methanol Formula: CH_4O Molecular weight: 32.04 g/mol
CAS No.: 67-56-1 EC-No.: 200-659-6
Classification: Flammable Liquid 2, Acute Toxicity 3; STOT SE 1; H225, H301 + H311 + H331, H370Percentage in Mixture: ~100 %
For full text of H-Statements mentioned in this Section, see Section 2.

Section 4: First Aid Measures

4.1 Description of first aid measures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed: No data available. Treat symptomatically.

Section 5: Fire-fighting Measures

5.1 Suitable extinguishing media: Dry powder or sand **Unsuitable extinguishing media:** Do NOT use water jet
5.2 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides
5.3 Advice for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary, and full protective gear to prevent contact with skin and eyes.
5.4 Further information: Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment (see section 8). Avoid dust formation. Avoid breathing vapors, mist, dust, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safeareas.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into theenvironment must be avoided.
6.2 Methods and materials for containment and cleaning up: Contain spillage. Solids (if applicable): Pick up and arrange disposal without creating dust. Sweep up and shovel. Liquids (if applicable): Absorb with non-combustible liquid-binding material (sand, earth, diatomite, vermiculite). Keep in suitable, closed containers for disposal.
6.3 Reference to other sections: For information on safe handling see section 7.For information on personal protection see section 8.
For information on disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling: See section 2. Avoid inhalation of vapors or mist, and avoid contact with skin and eyes. Wear appropriate personal protective equipment. Use explosion-proof equipment. Keep away from sources of ignition. Do not eat, drink, or smoke in work area. Take measures to prevent the buildup of electrostatic charge.
7.2 Precautions for safe storage: Keep container(s) tightly closed in a dry, well-ventilated place. Protect from physical damage. Opened containers must be carefully resealed and kept upright to prevent leakage. See label or product insert for appropriate storage temperature and additional specific information. Storage class (TRGS 510): Flammable liquids.
7.3 Specific end use(s): Other than use(s) specified in section 1, no other uses are stipulated.

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:
Component(s) with workplace control parameters
Methanol, CAS No. 67-56-1

Value	Control parameters	Basis
TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI section) Danger of cutaneous absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250.000000 ppm; 325.000000 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200.000000 ppm; 260.000000 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
TWA	200 ppm; 260 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
ST	250 ppm; 325 mg/m³	USA. NIOSH Recommended Exposure Limits
Potential for dermal absorption		
TWA	200 ppm; 260 mg/m³	USA. Occupational Exposure Limits; (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m³ is approximate		
STEL	250 ppm; 325 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		
TWA	200 ppm; 260 mg/m³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation		

Biological occupational exposure limits
Methanol, CAS No. 67-56-1

Parameters	Value	Biological specimen	Basis
Methanol	15.0000 mg/l	Urine	ACGIH – Biological Exposure Indices (BEI)
End of shift (As soon as possible after exposure ceases)			

Derived No Effect Level (DNEL)
Methanol, CAS No. 67-56-1

Application area	Exposure routes	Health effect	Value
Workers	Skin contact	Long-term systemic effects, Acute systemic effects	40mg/kg BW/d
Consumers	Skin contact	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects, Acute systemic effects	8mg/kg BW/d
Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	260 mg/m³
Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	50 mg/m³

Predicted No Effect Concentration (PNEC)
Methanol, CAS No. 67-56-1

Compartment	Value
SoilSoil	23.5 mg/kg
Marine water	15.4 mg/l

Fresh water	154 mg/l
Fresh water sediment	570.4 mg/kg
Onsite sewage treatment plant	100 mg/kg

8.1 Exposure controls:
Appropriate engineering controls: Provide adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from food and beverages.
Personal protective equipment
Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection: Handle with chemical resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory protection: Use a chemical fume hood or approved respiratory protection equipment.
Body protection: Lightweight, protective clothing to prevent skin exposure.
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties of mixture
Appearance: Liquid **Odor:** No data available **Odor Threshold:** No data available
pH: No data available **Melting point/freezing point:** No data available
Initial boiling point and boiling range: No data available **Flash point:** No data available
Evaporation rate: No data available **Flammability (solid, gas):** No data available
Upper/lower flammability or explosive limits No data available **Vapor pressure:** No data available
Vapor density: No data available **Relative density:** No data available
Water solubility: No data available **Partition coefficient: n-octanol/water:** No data available
Auto-ignition temperature: Not applicable **Decomposition temperature:** No data available
Viscosity: No data available **Explosive properties:** No data available **Oxidizing properties:** No data available
9.2 Other information: No data available

Section 10: Stability and Reactivity

10.1 Reactivity: No data available
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: No data available
10.4 Conditions to avoid: Keep away from open flame, hot surfaces, heat sources, and sources of ignition.
10.5 Incompatible materials: Acid chlorides, acid anhydrides, strong oxidizing agents, alkali metals, reducing agents, acids, peroxides
10.6 Hazardous decomposition products: No data available. In the event of fire: see section 5.

Section 11: Toxicological Information

11.1 Information on toxicological effects
To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.
Acute toxicity (Microcystin YR, CAS No. 101064-48-6)**:**
Inhalation No data available **Ingestion** No data available **Skin contact** No data available
Eye contact No data available **Respiratory or skin sensitization** No data available **Aspiration hazard** No data available
LD50 Intraperitoneal - Mouse - 0.1106 mg/kg
Acute toxicity (Methanol, CAS No. 67-56-1)**:**
Inhalation LC50 Inhalation - Rat - 4 h - 128.2 mg/l; LC50 Inhalation - Rat - 6 h - 87.6 mg/l; LD50 Dermal - Rabbit - 17,100 mg/kg **Ingestion** LDLO Oral - Human - 143 mg/kg (Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea); LD50 Oral - Rat - 1,187 - 2,769 mg/kg
Skin contact Rabbit skin—no irritation **Eye contact** Rabbit eye—no irritation
Respiratory or skin sensitization Maximization Test (GPMT)(OECD Test Guideline 406)--Guinea pig--does not cause skin sensitization
Aspiration hazard No data available
Mutagenicity (Methanol, CAS No. 67-56-1)**:** Ames test (*S. typhimurium*)--Result: negative; *in vitro* assay (fibroblasts)--Result: negative; *in vivo* mammalian bone-marrow cytogenetic test, chromosomal analysis (mouse, male and female)--Result: negative
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed humancarcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen byACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Teratogenicity: No data available **Reproductive/fertility toxicity:** Damage to fetus not classifiable

Specific target organ toxicity, single exposure: Inhalation—may cause respiratory irritation
Specific target organ toxicity, repeated exposure: No data available
Additional information: (Microcystin YR, CAS No. 101064-48-6): RTECS: GT4010000. Stomach - Irregularities - Based on Human Evidence. (Methanol, CAS No. 67-56-1): RTECS: PC1400000 Effects due to ingestion may include headache, dizziness, drowsiness, metabolic acidosis,coma, seizures. Methanol may be fatal or cause blindness if swallowed. Stomach - Irregularities - Based on Human Evidence

Section 12: Ecological Information

12.1 Toxicity: No data available
12.2 Persistence and degradability: No data available
12.3 Bioaccumulative potential: No data available
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: No data available
12.6 Other adverse effects: Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Section 13: Disposal Considerations

13.1 Waste treatment methods
Product: All waste must be handled and disposed according to local, state, and federal regulations. Avoid disposing large volumes in sewer.
Contaminated packaging: All waste must be handled and disposed according to local, state, and federal regulations.
Refer to sections 7 and 8 for safe handling guidance.

Section 14: Transport Information

DOT, Land Transport ADR/RID (cross-border), Maritime Transport IMDG, Air Transport ICAO-TI and IATA-DGR
UN Number: 3316
UN Proper shipping name: Chemical Kit, (contains Methanol)
Transport hazard class(es): 9
Packing group: III
Environmental hazard: See section 12
Bulk transport: Excepted/Limited quantity
Special considerations: See section 7 for handling

Section 15: Regulatory Information

EU Regulations, Hazard Symbol(s): Methanol: T (Toxic), F (Flammable)
Safety Phrases: Methanol: S 7 / 16 / 36 / 37 / 45, Keep container tightly closed. Keep away from sources of ignition, no smoking. Wear suitable protective clothing and gloves. In case of accident or if you become ill, seek medical advice immediately (show product label).
SARA Title III, Section 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Title III, Section 313 Components: Methanol, CAS No. 67-56-1
SARA 311/312 Hazards: Methanol, CAS No. 67-56-1: Fire Hazard, Acute Health Hazard, Chronic Health Hazard
State Right-to-Know
Massachusetts: Methanol, CAS No. 67-56-1Pennsylvania: Methanol, CAS No. 67-56-1 New Jersey: Methanol, CAS No. 67-56-1
California Prop. 65 Components: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Methanol, CAS No. 67-56-1

Section 16: Other information

This information is based on our present knowledge. While Gold Standard Diagnostics believes that the data contained herein are factual and the opinions expressed represent a best effort to present accurate information, the data are not to be taken as a warranty or representation for which Gold Standard Diagnostics assumes legal responsibility. The information shall not be taken as being all-inclusive and is to be used only as a guide.The data are offered solely for the user's consideration, investigation, and verification. These suggestions should not be confused with eitherstate, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and informationmust be determined by the user to be in accordance with applicable federal, state, and local regulations.

All materials and mixtures may present unknown hazards and should be used with caution. Since Gold Standard Diagnostics cannot control the methods, volumes, or conditions of use of this product, Gold Standard Diagnostics shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material. This product is sold for research use only. It is not for any human or animal therapeutic or clinical diagnostic use.

Date this SDS is effective: 8 Jul 2021
Version: 1

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ANEXO III

DECLARAÇÃO RELATIVA AO CUMPRIMENTO DO DISPOSTO NO INCISO XXXIII DO ARTIGO 7º DA CONSTITUIÇÃO FEDERAL

Ref.: LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023-DAD-3

DF Tecno Cientifica Ltda.-EPP, inscrita no CNPJ nº 10.476.350/0001-82, por intermédio de seu representante legal o Sr. Frank Falcão da Frota, portador da Carteira de Identidade nº 60.689.485-68 SJS/II RS e do CPF nº 962.022.460-49, DECLARA, para fins do disposto no inc. XXXIII do art. 7º da Constituição Federal, que não possui em seu quadro funcional menor de dezoito anos em trabalho noturno, perigoso ou insalubre ou menor de dezesseis anos, salvo na condição de aprendiz, a partir de catorze anos.

Ressalva: Emprego/Trabalha menor, a partir de quatorze anos, na condição de aprendiz ( ).

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Dados: 2023.05.30 14:43:38 -03'00'

Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

(Observação: em caso afirmativo, assinalar a ressalva acima).

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ANEXO V

DECLARAÇÃO DE ENQUADRAMENTO NOS REQUISITOS PREVISTOS NA LEI COMPLEMENTAR N° 123 DE 14/12/2006

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023–DAD-3

DF Tecno Cientifica Ltda.-EPP, inscrita no CNPJ nº 10.476.350/0001-82, por intermédio de seu representante legal o Sr. Wilson Alves Colvara, portador da Carteira de Identidade nº 60.689.485-68 SJS/II RS e do CPF nº 962.022.460-49, DECLARA, para fins do disposto no item 10.1.1 do Edital do Pregão Eletrônico n° 0021/2023, sob as sanções administrativas cabíveis e sob as penas da lei, que se enquadra nos requisitos previstos na Lei Complementar nº 123, de 14.12.2006, em especial quanto ao seu art. 3º.

Declara ainda que a empresa está excluída das vedações constantes do parágrafo 4º do artigo 3º da Lei Complementar nº. 123, de 14 de dezembro de 2006.

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

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ANEXO VI

FORMULÁRIO "SOLICITAÇÃO DE CADASTRO DE CREDOR"

CNPJ/CPF: 10.476.350/0001-82
Registrar o nº completo, inclusive o dígito verificador, sem separação, do CNPJ ou CPF do credor, conforme se tratar de pessoa física ou jurídica.

Nome: DF Tecno Cientifica Ltda.-EPP
Informar o nome do credor.

Endereço: Rua Vasomiro Malaquias de Barros, n° 67 (Salas 22/23)
Informar o endereço completo do credor.

Município: São José dos Campos
Informar o nome do município do domicílio do credor.

UF: SP
Informar a sigla da Unidade da Federação de domicílio do credor.

CEP: 12231-642
Informar o Código de Endereçamento Postal de domicílio do credor.

Banco: BRADESCO S/A
Informar o código que identifica, no serviço de compensação, o banco de domicílio do credor

Agência: 01960
Informar o código da agência que identifica, no serviço de compensação, a agência de domicílio do credor.

Conta Corrente: 0091340-5
Informar o número da conta corrente mantida pelo credor na agência bancária indicada, inclusive o dígito verificador, sem hífen.

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Dados: 2023.05.30 14:46:18 -03'00'

Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

dF Tecno-Científica

ANEXO VII

DECLARAÇÃO DE ELABORAÇÃO INDEPENDENTE DE PROPOSTA

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023–DAD-3

Wilson Alves Colvara, como representante devidamente constituído de DF Tecno Cientifica Ltda.-EPP, doravante denominado LICITANTE, para fins do disposto no subitem 10.1.1 do Edital, do Pregão Eletrônico – PE 0021/2023, para "**AQUISIÇÃO DE PADRÕES DE CIANOTOXINAS EM ÁGUA**", declara, sob as penas da lei, em especial o art. 299 do Código Penal Brasileiro, que:

1. A proposta anexa foi elaborada de maneira independente, e que o conteúdo da proposta anexa não foi, no todo ou em parte, direta ou indiretamente, informado a, discutido com ou recebido de qualquer outro participante potencial ou de fato do Pregão Eletrônico – PE 0021/2023, por qualquer meio ou qualquer pessoa;

2. A intenção de apresentar a proposta anexa não foi informada a, discutida com ou recebida de qualquer outro participante potencial ou de fato do Pregão Eletrônico – PE 0021/2023, por qualquer meio ou qualquer pessoa;

3. Que não tentou, por qualquer meio ou qualquer pessoa, influir na decisão de qualquer outro participante potencial ou de fato do Pregão Eletrônico – PE 0021/2023, quanto a participar ou não da referida licitação;

4. Que o conteúdo da proposta anexa não será, no todo ou em parte, direta ou indiretamente, comunicado ou discutido com qualquer outro participante potencial ou de fato do Pregão Eletrônico – PE 0021/2023, antes da adjudicação do objeto da referida licitação;

5. Que o conteúdo da proposta anexa não foi no todo ou em parte, direta ou indiretamente, informado a, discutido com ou recebido da Companhia Estadual de Águas e Esgotos – CEDAE antes da abertura oficial das propostas; e

6. Que está plenamente ciente do teor e da extensão desta declaração e que detém plenos poderes e informações para firmá-la.

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

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ANEXO VIII

DECLARAÇÃO DE INEXISTÊNCIA DE FATOS IMPEDITIVOS CONSTANTES DO ART. 38 DA LEI Nº 13.303/16

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023–DAD-3

Prezados Senhores,

O licitante, DF Tecno Científica Ltda.-EPP, inscrito no CNPJ sob o nº 10.476.350/0001-82 DECLARA, sob as penas da Lei, que:

1. Não é Administrador ou Empregado da Companhia Estadual de Águas e Esgotos – CEDAE (aplicável à contratação de pessoa física);

2. Não possui(em) Administrador(es) ou Sócio(s) detentor(es) de mais de 5% (cinco por cento) do capital social que seja Administrador ou Empregado da Companhia Estadual de Águas e Esgotos - CEDAE;

3. Não se encontra(m) sob sanção administrativa de suspensão de contratação pela Companhia Estadual de Águas e Esgotos - CEDAE;

4. Não foi(ram) declarada(s) inidônea(s) pela União, por Estado ou pelo Distrito Federal, enquanto perdurarem os efeitos da sanção;

5. Não é(são) constituída(s) por Sócio de Empresa suspensa, impedida ou declarada inidônea;

6. Não possui(em) Administrador que seja Sócio de Empresa suspensa, impedida ou declarada inidônea;

7. Não é(são) constituída(s) por Sócio que tenha sido Sócio ou Administrador de Empresa suspensa, impedida ou declarada inidônea, no período dos fatos que deram ensejo à sanção administrativa;

8. Não possui(em) Administrador que seja Sócio ou Administrador de Empresa suspensa, impedida ou declarada inidônea, no período dos fatos que deram ensejo à sanção;

9. Não possui(em), nos seus quadros de Diretoria, pessoa que participou, em razão de vínculo de mesma natureza, de Empresa (s) declarada(s) inidônea(s).

10. Não possui proprietário, mesmo na condição de Sócio, que tenha terminado seu prazo de gestão ou rompido seu vínculo com a Companhia Estadual de Águas e Esgotos – CEDAE, há menos de 6 (seis) meses;

11. Não possui Sócio ou Administrador com relação de parentesco, até o terceiro grau civil, com:

11.1) Administrador da Companhia Estadual de Águas e Esgotos - CEDAE;

11.2) Empregado da Companhia Estadual de Águas e Esgotos - CEDAE cujas atribuições envolvam a atuação na área responsável pela licitação ou contratação;

11.3) Autoridade do Estado do Rio de Janeiro, cuja Companhia Estadual de Águas e Esgotos – CEDAE está vinculada.

São José dos Campos, 01 de junho de 2023.

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Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

dF Tecno-Científica

ANEXO IX

DECLARAÇÃO DE QUE NÃO É ADOTADA RELAÇÃO TRABALHISTA CARACTERIZANDO TRABALHO FORÇADO OU ANÁLOGO A TRABALHO ESCRAVO

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023–DAD-3

DF Tecno Cientifica Ltda.-EPP, inscrita no CNPJ nº 10.476.350/0001-82, por intermédio de seu representante legal Sr. Wilson Alves Colvara, portador da Carteira de Identidade nº 60.689.485-68 SJS/II RS e do CPF nº 100.064.437-53, DECLARA que não é adotada relação trabalhista caracterizada como trabalho forçado ou análogo a trabalho escravo, conforme disposto nas Leis nº 9.777/1998 e nº 10.803/2003.

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

dF Tecno-Científica

ANEXO X

DECLARAÇÃO DA EMPRESA DE QUE NÃO SE ENCONTRA EM

SITUAÇÃO DE FALÊNCIA, INSOLVÊNCIA OU CONCORDATA

LICITAÇÃO POR PREGÃO ELETRÔNICO Nº 0021/2023– DAD-3

DF Tecno Cientifica Ltda.-EPP, inscrita no CNPJ nº 10.476.350/0001-82, por intermédio de seu representante legal Sr. Wilson Alves Colvara, portador da Carteira de Identidade nº 60.689.485-68 SJS/II RS e do CPF nº 962.022.460-49, DECLARA que não encontra-se em situação de falência, insolvência ou concordata, deferida antes da vigência da Lei Federal n° 11.101/05.

São José dos Campos, 01 de junho de 2023.

WILSON ALVES COLVARA:96202246049

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Wilson Alves Colvara
Diretor
RG: 60.689.485-68 SJS/II RS
CPF: 962.022.460-49

PROCESSO N° SEI-140001/004335/2022 - MARCEL SILVA GLADULICH, Procurador do Estado, ID Funcional n.º 43872409, correspondente ao período de 16/06/2023 a 28/06/2023 (13 dias).

PROCESSO N° SEI-140001/006221/2022 - ELIAS GAZAL ROCHA, Procurador do Estado, ID Funcional n.º 19231148, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/002318/2022 - FLAVIO ASSAID SFAIR DA COSTA ROCHA, Procurador do Estado, ID Funcional n.º 50243373, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/043042/2022 - MARCELLE FIGUEIREDO DA CUNHA, Procuradora do Estado, ID Funcional n.º 43833624, correspondente ao período de 15/06/2023 a 02/07/2023 (18 dias).

PROCESSO N° SEI-140001/002618/2022 - RICARDO LIMA ALMEIDA, Procurador do Estado, ID Funcional n.º 50153714, correspondente ao período de 14/06/2023 a 02/07/2023 (19 dias).

PROCESSO N° SEI-140001/004475/2022 - BRUNO TEIXEIRA DUBEUX, Procurador do Estado, ID Funcional n.º 41955048, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/003632/2022 - VICTOR CAMPOS CLEMENT LEAHY, Procurador do Estado, ID Funcional n.º 50143794, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/002613/2022 - NILSON FURTADO DE OLIVEIRA FILHO, Procurador do Estado, ID Funcional n.º 19230753, correspondente ao período de 29/05/2023 a 27/06/2023 (30 dias).

PROCESSO N° SEI-140001/002613/2022 - NILSON FURTADO DE OLIVEIRA FILHO, Procurador do Estado, ID Funcional n.º 19230753, correspondente ao período de 28/06/2023 a 07/07/2023 (10 dias).

PROCESSO N° SEI-140001/002582/2022 - RAFAEL SANTANA BASTOS, Procurador do Estado, ID Funcional n.º 43592643, correspondente ao período de 05/06/2023 a 24/06/2023 (20 dias).

PROCESSO N° SEI-140001/002582/2022 - RAFAEL SANTANA BASTOS, Procurador do Estado, ID Funcional n.º 43592643, correspondente ao período de 28/06/2023 a 07/07/2023 (10 dias).

PROCESSO N° SEI-140001/008379/2022 - CAMILA PEZZINO BALANIUC DANTAS, Procuradora do Estado, ID Funcional n.º 43348181, correspondente ao período de 29/05/2023 a 07/06/2023 (10 dias).

PROCESSO N° SEI-140001/008379/2022 - CAMILA PEZZINO BALANIUC DANTAS, Procuradora do Estado, ID Funcional n.º 43348181, correspondente ao período de 23/06/2023 a 07/07/2023 (15 dias).

PROCESSO N° SEI-140001/004597/2022 - DANIEL DE ARAUJO PERALTA, Procurador do Estado, ID Funcional n.º 43348246, correspondente ao período de 29/05/2023 a 07/06/2023 (10 dias).

PROCESSO N° SEI-140001/003942/2022 - JOAO FLAVIO ROTTA, Procurador do Estado, ID Funcional n.º 43347975, correspondente ao período de 12/06/2023 a 01/07/2023 (20 dias).

PROCESSO N° SEI-140001/017225/2022 - LUIZ FILIPPE ESTEVES CUNHA, Procurador do Estado, ID Funcional n.º 99991349, correspondente ao período de 02/06/2023 a 01/07/2023 (30 dias).

PROCESSO N° SEI-140001/031367/2022 - FLAVIO COSTA BEZERRA FILHO, Procurador do Estado, ID Funcional n.º 99991373, correspondente ao período de 31/05/2023 a 09/06/2023 (10 dias).

PROCESSO N° SEI-140001/031367/2022 - FLAVIO COSTA BEZERRA FILHO, Procurador do Estado, ID Funcional n.º 99991373, correspondente ao período de 10/06/2023 a 17/06/2023 (8 dias).

PROCESSO N° SEI-140001/031367/2022 - FLAVIO COSTA BEZERRA FILHO, Procurador do Estado, ID Funcional n.º 99991373, correspondente ao período de 19/06/2023 a 03/07/2023 (15 dias).

PROCESSO N° SEI-140001/005323/2022 - CARLOS DA COSTA E SILVA FILHO, Procurador do Estado, ID Funcional n.º 19221738, correspondente ao período de 22/05/2023 a 20/06/2023 (30 dias).

PROCESSO N° SEI-140001/011930/2022 - MARCELO ROCHA DE MELLO MARTINS, Procurador do Estado, ID Funcional n.º 19234872, correspondente ao período de 09/06/2023 a 23/06/2023 (15 dias).

PROCESSO N° SEI-140001/003924/2022 - DEBORA EUGENIA MAY VIRIATO, Procuradora do Estado, ID Funcional n.º 42666104, correspondente ao período de 01/06/2023 a 22/06/2023 (22 dias).

PROCESSO N° SEI-140001/005318/2022 - CARLOS ANDRE SILVA BAPTISTA, Procurador do Estado, ID Funcional n.º 43871623, correspondente ao período de 16/06/2023 a 30/06/2023 (15 dias).

PROCESSO N° SEI-140001/002552/2022 - LUIS PAULO FERREIRA DOS SANTOS, Procurador do Estado, ID Funcional n.º 19237847, correspondente ao período de 21/06/2023 a 30/06/2023 (10 dias).

PROCESSO N° SEI-140001/004323/2022 - REINALDO FREDERICO AFONSO SILVEIRA, Procurador do Estado, ID Funcional n.º 19220740, correspondente ao período de 01/06/2023 a 30/06/2023 (30 dias).

PROCESSO N° SEI-140001/004086/2022 - RODRIGO BORGES VALADAO, Procurador do Estado, ID Funcional n.º 41954777, correspondente ao período de 01/06/2023 a 30/06/2023 (30 dias).

PROCESSO N° SEI-140001/003637/2022 - PAOLO HENRIQUE SPILOTROS COSTA, Procurador do Estado, ID Funcional n.º 19226616, correspondente ao período de 08/06/2023 a 02/07/2023 (25 dias).

PROCESSO N° SEI-140001/003963/2022 - GUILHERME PAIAO FERREIRA PINTO, Procurador do Estado, ID Funcional n.º 50243934, correspondente ao período de 08/06/2023 a 02/07/2023 (25 dias).

PROCESSO N° SEI-140001/004480/2022 - MAURICIO CARLOS ARAUJO RIBEIRO, Procurador do Estado, ID Funcional n.º 5717590, correspondente ao período de 14/06/2023 a 25/06/2023 (12 dias).

PROCESSO N° SEI-140001/003906/2022 - FILIPE BEZERRA DE MENEZES PICANÇO, Procurador do Estado, ID Funcional n.º 50156667, correspondente ao período de 01/06/2023 a 03/07/2023 (33 dias).

PROCESSO N° SEI-140001/016022/2023 - JULIANA FLORENTINO DE MOURA, Procuradora do Estado, ID Funcional n.º 50143760, correspondente ao período de 09/06/2023 a 23/06/2023 (15 dias).

PROCESSO N° SEI-140001/004482/2022 - NATALIA FARIA DE SOUZA, Procuradora do Estado, ID Funcional n.º 43592953, correspondente ao período de 29/06/2023 a 07/07/2023 (9 dias).

PROCESSO N° SEI-140001/004505/2022 - ANNA CAROLINA GUIMARAES DE SOUZA, Procuradora do Estado, ID Funcional n.º 19233167, correspondente ao período de 12/06/2023 a 21/06/2023 (10 dias).

PROCESSO N° SEI-140001/033320/2022 - LEONARDO OLIVEIRA DA SILVA, Procurador do Estado, ID Funcional n.º 99991675, correspondente ao período de 29/06/2023 a 03/07/2023 (5 dias).

PROCESSO N° SEI-140001/003489/2022 - FABRICIO DO ROZARIO VALLE DANTAS LEITE, Procurador do Estado, ID Funcional n.º 19219148, correspondente ao período de 05/06/2023 a 04/07/2023 (30 dias).

PROCESSO N° SEI-140001/002587/2022 - JOAO MORAES NETO, Procurador do Estado, ID Funcional n.º 50320467, correspondente ao período de 05/06/2023 a 19/06/2023 (15 dias).

PROCESSO N° SEI-140001/002569/2022 - RICARDO JOSE DA ROCHA SILVA, Procurador do Estado, ID Funcional n.º 43348092, correspondente ao período de 29/06/2023 a 07/07/2023 (9 dias).

PROCESSO N° SEI-140001/017386/2022 - ANA CAROLINA SOARES PIRES DE MELLO FREIRE, Procuradora do Estado, ID Funcional n.º 43871445, correspondente ao período de 12/06/2023 a 01/07/2023 (20 dias).

PROCESSO N° SEI-140001/004478/2022 - INGRID ANDRADE SARMENTO LEAL, Procuradora do Estado, ID Funcional n.º 41954963, correspondente ao período de 05/06/2023 a 04/07/2023 (30 dias).

PROCESSO N° SEI-140001/003236/2022 - RENATA COTRIM NACIF, Procuradora do Estado, ID Funcional n.º 41954874, correspondente ao período de 05/06/2023 a 04/07/2023 (30 dias).

PROCESSO N° SEI-140001/004481/2022 - HUGO WILKEN MAURELL, Procurador do Estado, ID Funcional n.º 43871747, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/006224/2022 - BALTAZAR JOSE VASCONCELOS RODRIGUES, Procurador do Estado, ID Funcional n.º 43871518, correspondente ao período de 01/06/2023 a 02/07/2023 (32 dias).

PROCESSO N° SEI-140001/004293/2022 - ROGERIO CARVALHO GUIMARAES, Procurador do Estado, ID Funcional n.º 19232136, correspondente ao período de 01/06/2023 a 30/06/2023 (30 dias).

PROCESSO N° SEI-140001/004500/2022 - NICOLA TUTUNGI JUNIOR, Procurador do Estado, ID Funcional n.º 42666090, correspondente ao período de 05/06/2023 a 04/07/2023 (30 dias).

Louvada nas informações prestadas pelo chefe imediato, **AUTORIZO**.

Id: 2494109

PROCURADORIA GERAL DO ESTADO
SECRETARIA DE GESTÃO

DESPACHO DA PROCURADORA-ASSISTENTE
DE 07/07/2023

PROCESSO Nº SEI-140001/003640/2022 - JOAQUIM PEDRO ROHR, Procurador do Estado, ID Funcional n.º 42666082, correspondente ao período de 01/06/2023 a 09/06/2023 (09 dias).

Louvada nas informações prestadas pelo chefe imediato, **AUTORIZO**.

Id: 2494111

PROCURADORIA GERAL DO ESTADO
DIRETORIA DE GESTÃO

DESPACHO DA ASSESSORA CHEFE
DE 17.07.2023

PROCESSO Nº SEI-14/001/023379/2019 - RECONHEÇO A DÍVIDA da PROCURADORIA GERAL DO ESTADO DO RIO DE JANEIRO a favor do Procurador GUILHERME PAIÃO FERREIRA PINTO, referente a diária no valor de R$ 7.635,76.

Id: 2494276

AVISOS, EDITAIS E TERMOS DE CONTRATOS

Secretaria de Estado da Casa Civil

ADMINISTRAÇÃO VINCULADA

IMPRENSA OFICIAL DO ESTADO DO RIO DE JANEIRO

AVISO

PREGÃO ELETRÔNICO Nº 004/2023

A COMISSÃO PERMANENTE DE LICITAÇÕES DA IMPRENSA OFICIAL DO ESTADO DO RIO DE JANEIRO, no uso de suas atribuições, comunica aos interessados que o Pregão Eletrônico nº 004/2023 foi declarado **DESERTO,** diante da ausência de interessados em participar do certame. Processo nº SEI-150015/000758/2023

Id: 2494354

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE INSTRUMENTO CONTRATUAL

INSTRUMENTO: Contrato CEDAE nº 075/2023 (DPR).
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a ASSOCIAÇÃO BRASILEIRA DE ENGENHARIA SANITÁRIA E AMBIENTAL - ABES.
OBJETO: "o patrocínio e a participação da CEDAE no evento "Seminário Estadual de Saneamento e Meio Ambiente - SANEARio 2023"".
PRAZO: Este contrato estará vigente após sua assinatura pelo período estritamente necessário à realização do evento e disponibilização dos recursos.
VALOR TOTAL: R$ 100.000,00 (cem mil reais).
DATA DE ASSINATURA: 11/07/2023
FUNDAMENTO: PROCESSO Nº SEI-150001/016429/2023 (Inexigibilidade de Licitação - IL nº 015/2023 - DPR).

Id: 2494314

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE INSTRUMENTO CONTRATUAL

INSTRUMENTO: Contrato CEDAE nº 077/2023 (DSG).
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a DF TECNO-CIENTÍFICA LTDA.
OBJETO: "AQUISIÇÃO DE PADRÕES DE CIANOTOXINAS EM ÁGUA".
PRAZO: 02 (dois) meses.
VALOR TOTAL: R$ 101.108,00 (cento e um mil e cento e oito reais).
DATA DE ASSINATURA: 12/07/2023
FUNDAMENTO: Processo nº SEI-150001/029273/2022 (Pregão Eletrônico - PE nº 0021/2023).

Id: 2494315

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE INSTRUMENTO CONTRATUAL

INSTRUMENTO: Contrato CEDAE nº 068/2023 (DTP).
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a IEC - INSTALAÇÕES E ENGENHARIA DE CORROSÃO LTDA.
OBJETO: "SERVIÇO DE INSPEÇÃO, LEVANTAMENTO E MEDIÇÃO DE CAMPO DOS SISTEMAS DE PROTEÇÃO CATÓDICA JÁ INSTALADOS E DAS ADUTORAS DE AÇO QUE AINDA NÃO UTILIZAM ESSA PROTEÇÃO, INCLUINDO-SE NO ESCOPO DA CONTRATAÇÃO A EMISSÃO DE RELATÓRIOS TÉCNICOS DE INSPEÇÃO E DIAGNÓSTICO, COM CONCLUSÕES E RECOMENDAÇÕES".
PRAZO: 60 (sessenta) dias.
VALOR TOTAL: R$ 35.000,00 (trinta e cinco mil reais).
DATA DE ASSINATURA: 12/07/2023
FUNDAMENTO: Processo nº SEI-150001/005627/2023 (Dispensa de Licitação n. 003/2023 - DTP).

Id: 2494316

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE INSTRUMENTO CONTRATUAL

INSTRUMENTO: Contrato CEDAE nº 074/2023 (DTP).
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a R.A.R. ENGENHARIA LTDA.
OBJETO: "INSPEÇÃO DE SEGURANÇA REGULAR (ISR) DA BARRAGEM AÇUDE DO CAMORIM, NO MUNICÍPIO DO RIO DE JANEIRO".
PRAZO: 60 (sessenta) dias.
VALOR TOTAL: R$ 28.566,00 (vinte e oito mil, quinhentos e sessenta e seis reais).
DATA DE ASSINATURA: 12/07/2023
FUNDAMENTO: Processo nº SEI-150001/012881/2023 (Dispensa de Licitações - DL nº 004/2023 DTP).

Id: 2494317

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE TERMO

INSTRUMENTO: TERMO DE RECONHECIMENTO DE DÍVIDA, AJUSTE DE CONTAS E DISTRATO Nº 020/2023.
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a CONSTRUTORA MONTENEGRO LTDA.
OBJETO: "o Reconhecimento da Dívida de reajuste, Ajuste de contas e a Resilição do CONTRATO N. 192/2019 (DRI)".
PRAZO: O pagamento será feito no prazo máximo de 30 (trinta) dias contados da assinatura deste Termo.
VALOR: R$ 581.691,15 (quinhentos e oitenta e um mil, seiscentos e noventa e um reais e quinze centavos).
DATA DE ASSINATURA: 11/07/2023
FUNDAMENTO: Processo n° SEI-E-07/100.087/2019.

Id: 2494318

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS

EXTRATO DE TERMO ADITIVO

INSTRUMENTO: Aditivo nº 02 ao Contrato CEDAE nº 023/2023 (DTP).
PARTES: A COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS - CEDAE - e a OECI S.A.
OBJETO: "promover a inclusão de responsável técnico".
PRAZO: SEM PRAZO.
VALOR: SEM VALOR.
DATA DE ASSINATURA: 10/07/2023
FUNDAMENTO: Processo nº SEI-E-12/800.353/2021 (Procedimento Licitatório - LI n. 014/2021).

Id: 2494313

SECRETARIA DE ESTADO DA CASA CIVIL
COMPANHIA ESTADUAL DE ÁGUAS E ESGOTOS
ASSESSORIA DE LICITAÇÕES

AVISO

A ASSESSORIA DE LICITAÇÕES COMUNICA que o pregão em referência que se encontrava agendada para o dia 28/07/2023, fica adiada sine die.

MODALIDADE DE LICITAÇÃO: PREGÃO ELETRÔNICO N° 0032/2023 Objeto: AQUISIÇÃO DE SAIS DE FERRO PARA A ETA GUANDU E PARA A UTR POÇOS-QUEIMADOS

Id: 2494177

Secretaria de Estado de Planejamento e Gestão

SECRETARIA DE ESTADO DE PLANEJAMENTO E GESTÃO

EXTRATO DE TERMO ADITIVO

INSTRUMENTO: 1º (Primeiro) Termo Aditivo ao Contrato nº 013/2022.
PARTES: O Estado do Rio de Janeiro, pela Secretaria de Estado de Planejamento e Gestão e a empresa DEDETEC Serviços De Imunização LTDA.
OBJETO: Prorrogação do prazo de vigência do Contrato nº 13, relativo à prestação de serviços contínuos de Gerenciamento e Controle Integrado de Vetores e Pragas Urbanas, com fornecimento de produtos químicos, materiais e equipamentos necessários a execução das atividades exigidas no presente Termo de Referência, a ser executado nos órgãos vinculados à Secretaria de Estado de Planejamento e Gestão (SEPLAG), a saber: Arquivo Público do Estado do Rio de Janeiro (APERJ), Depósito Público do Estado do Rio de Janeiro (DEPERJ) e Ed. Estácio de Sá (ID SIGA-RJ - 101365), na forma do Termo de Referência e do instrumento convocatório com fundamento no art. 57, inciso II, da Lei nº 8.666/93 e na Cláusula Segunda (parágrafo primeiro) do contrato, assim como a concessão do reajuste contratual, com fundamento no art. 55 inciso III, da Lei nº 8.666, de 1993, e na Cláusula Nona (parágrafo oitavo) do contrato.
DATA DE ASSINATURA: 17/07/2023
VALOR: R$ 49.443,45 (quarenta e nove mil quatrocentos e quarenta e três reais e quarenta e cinco centavos).
PRAZO: 12 (doze) meses.
FUNDAMENTO: art. 57, §1º, da Lei nº 8.666, de 1993.
PROCESSO N° SEI-120001/009967/2020.

Id: 2494042

Secretaria de Estado de Fazenda

SECRETARIA DE ESTADO DE FAZENDA
SUBSECRETARIA DE RECEITA
SUPERINTENDÊNCIA DE ARRECADAÇÃO

EDITAL

OS CONTRIBUINTES ABAIXO FICAM CIENTIFICADOS da lavratura dos autos de infração por infringência à legislação do ICMS. O pagamento dos créditos tributários reclamados deverão ser efetuados no prazo de 30 (trinta) dias da ciência dos autos de infração, que se considera feita 15 (quinze) dias após a publicação deste edital, com redução do valor da multa de 50 % (cinquenta por cento). Em caso de discordância, no mesmo prazo, os contribuintes poderão apresentar impugnação aos autos de infração.
Os processos administrativos respectivos encontram-se à disposição dos interessados nos endereços das respectivas repartições fiscais. Número de controle 68/2023

REPARTIÇÃO FISCAL
99.12 - Posto de Controle Fiscal de Nhangapi
Rodovia Presidente Dutra, Km 324, Nhangapi , CEP 27580000, Itatiaia - RJ

AGIMIX EXTRACAO COMERCIO E TRANSPORTE LTDA
CNPJ 4.252.277/0001-62 - Processo nº SEI-040224/001695/2023
Auto de Infração nº 03.661849-4, de 07/04/2023
Valor reclamado: R$ 1.949,80.