بسم الله الرحمن الرحيم

MALDIVES FOOD AND DRUG AUTHORITY
Ministry of Health
Male', Maldives

Terms of Reference

CALIBRATION OF EQUIPMENTS USED AT NATIONAL HEALTH LABORATORY FROM A CALIBRATION CENTER ACCREDITTED TO ISO/IEC 17025

03rd June 2015

1. Introduction

National Health Laboratory (NHL) is a division of Maldives Food and Drug Authority (MFDA) with the main mandate of quality control, safety and hygiene verification of food and pharmaceuticals. NHL is divided into two main sections namely, Chemistry and Microbiology laboratories. The matrices tested include water, food and swabs and brought from food establishments, factories and resorts and pharmaceuticals.

NHL has been accredited to the international standard ISO/IEC 17025 since December 2008. For the maintenance of its accreditation status it is compulsory to calibrate equipments from a calibration centre accredited to ISO/IEC17025.

2. Scope and Objectives

The objective of this TOR is to find a competent calibration center accredited to the international standard ISO/IEC 17025 to calibrate the equipments at NHL.

The List 1 attached includes the details of equipments that require calibration.

3. Expected Outcomes

The chosen party is expected to:

1. Calibrate the equipments in list 1 by sending technicians (for calibration of equipments that can be calibrated at NHL site) and by taking items to site of calibration (for items that cannot be calibrated at NHL.
2. Issue calibration certificates with sufficient data for analysis and uncertainty calculations
3. Put a sticker/label on the equipment with required details

4. Requirements / Qualifications

i. The calibration centers intending to offer calibration services to NHL shall have the following qualifications and requirements.
   a) The calibration center must be accredited to the standard ISO/IEC 17025.
   b) Calibration certificates/reports must be issued, in paper, after calibration, bearing the accreditation logo.
   c) Calibration certificates must at least contain the following information:
      a. Description of the equipment
      b. Serial No.
      c. Identification No/Manufacturer and Model no.
      d. Calibration Date

e. Location of calibration
f. Test conditions:
g. Reference standard used
h. Method of calibration
i. Uncertainty associated with the activity

d) A label/sticker should be placed on the equipment after calibration with the details:
   a. LOGO of the calibration center
   b. A reference number
   c. Identification number of the equipment
   d. Calibrated by
   e. Date of calibration
e) Calibration certificates should be received to NHL in at least a month's time.
f) The calibration must have at least 3 years' of experience and must be currently engaged in providing the service.

5. <u>Quoting and required documents</u>

i. The quotations must indicate clearly the following charges in US Dollars:
   a. Rate of calibration/consultancy charges for each type of equipment and the total cost
   b. Postage costs involved in sending any required equipments to the calibration center
   c. Postage costs in returning the equipments to NHL, Maldives
   d. Return airfare for technicians for the calibration to arrive to Maldives and their return
   e. Accommodation charges for the calibration technicians for the period of stay in Maldives
   f. No. of days required for the calibration done in NHL and posted items
   g. Charges for any freight of devices/ equipments / solutions/ standards required for the calibrations that would be brought in
   h. Incidental charges if any
   i. Any other charges that might incur for the activity

ii. Equipments that cannot be calibrated in the laboratory site should be identified in the quotation.

iii. Arrangements that need to be made, standards and apparatus that need to be available from NHL such as required environment conditions

iv. In addition to the quotation interested parties should submit:

a) A copy of the accreditation certificate to ISO/IEC 17025
b) A sample report of calibration
c) Brief profile
d) List of clients/ laboratories that had sought calibration services in the past 3 years.
e) Payment conditions
f) Any other terms and conditions subject to the process
g) Contact details

6. <u>Duration:</u> All calibrations are to be completed before the 31st December 2015.

7. <u>Contact:</u> Thooma Adam/ Maldives Food and Drug Authority

8. <u>Deadline for submission:</u>

Interested parties are to submit signed quotations and other required documents on or before the **17TH June 2015 to**

Maldives Food and Drug Authority, Ministry of Health,
Roashanee Building,
Sosun Magu,
Male' 20184
Republic of Maldives.

Electronic versions of the quotations and documents can be emailed to nhl@health.gov.mv before the above due date. Late submissions cannot be considered under any circumstances.

List 1- Details of Items Requiring External Calibration - 2015

#	Item	Manufacturer/ Model No.	Serial/ Number	Lab Identification Number	Performance Range/Capacity	Resolution	Location/Lab	Required Accuracy
1.	Refrigerator	Whirlpool	-	NHL/CH-FC/EQ010	Chiller 2-8°C±2 and freezer <18°C	1°C	Food Chemistry 2	Chiller 2-8°C±2 and freezer <18°C
2.	Refrigerator	Whirlpool	-	NHL/CH-WC/EQ077	Chiller 2-8°C±2 and freezer <18°C	1°C	Water Chemistry	Chiller 2-8°C±2 and freezer <18°C
3.	Refrigerator	Whirlpool	-	NHL/CH-GN/EQ145	2-8 ^{0}C	-	Chemical Store	2-8 ^{0}C
4.	Refrigerator	LAB COLD	-	NHL/CH-GN/EQ161	2-8 ^{0}C	-	Chemical Store	2-8 ^{0}C
5.	Refrigerator	Hitachi	2160100075	NHL/MB-MR/EQ009	0-4°C	2-8°C±2	Media Room	0-4°C
6.	Refrigerator	Akira	DS-R278/EB 1	NHL/MB-MR/EQ065	2-8°C±2	2-8°C±2	Media Room	2-8°C±2
7.	Refrigerator	Whirlpool	B3117Z	NHL/MB-FM/EQ007	2-8°C±2	2-8°C±2	Food Micro	2-8°C±2
8.	Refrigerator	Hitachi	2360100134	NHL/MB-FM/EQ008	2-8°C±2	2-8°C±2	Food Micro	2-8°C±2
9.	Bio medical Freezer	40 Max		NHL/MB-VL/EQ038	<-18°C	1°C	Veterinary Laboratory	>-18°C
10.	Deep Freezer Fridge	Sanyo Ultra Low MDF-192AT	50607144	NHL/MB-VL/EQ040	-20 to -30°C	0.1°C	Molecular Biology Lab	-20 to -30°C
11.	Muffle Furnace	Bibbystuart	-	NHL/CH-BW/EQ009	Up to 1200°C	-	Bottle Wash Chemistry	550 °C and 700°C
12.	Hot air oven	Dalal	-	NHL/CH-BW/EQ023	50-300°C	10°C	Bottle Wash, Chemistry	50-300°C
13.	OMT Oven	Gallenkamp OM TOT5.XX2.C	SG 98/02/314	NHL/MB-FM/EQ006	55°C±2	0.1°C	Bottle Wash Micro	55°C±2
14.	Turbidity Meter 2100N	Hach, USA	-	NHL/CH-WC/EQ058	0-4000 NTU	1NTU	Water Chemistry	0-4000 NTU
15.	Spectro photometer DR4000	Hach, USA	-	NHL/CH-WC/EQ061	-	-	Water Chemistry	-
16.	Spectro photometer DR2010	Hach, USA	000500018132	NHL/CH-WC/EQ062	-	-	Water Chemistry	-
17.	BOD incubator	Hach, USA	-	NHL/CH-WC/EQ079	20°C	-	Water Chemistry	20°C
18.	pH meter	Eutech	11569174	NHL/CH-WC/EQ0109	1-10pH units	0.01 pH units	Water Chemistry	4, 7 and 10 pH units
19.	Digital Burette	Easy Calibration	-	NHL/CH-WC/EQ0116	0-999mL	0.01mL	Water Chemistry	-
20.	Spectrometer DR5000	Hach, USA	-	NHL/CH-WC/EQ0082	-	-	Water Chemistry	-
21.	Hot air oven	Dalal	-	NHL/CH-BW/EQ023	50-300°C	10°C	Bottle Wash, Chemistry	50-300°C
22.	Lamina Flow	ESCO	2009-39437	NHL/MB-MB/EQ059	-	-	Food Microbiology	-
23.	Fume Hood	ESCO	2009-39431	NHL/CH-GN/EQ146	-	-	Water Chemistry	-
24.	Fume Hood	ESCO	2009-39432	NHL/CH-GN/EQ147	-	-	Bottle Wash	-
25.	Weight Set (22 pieces) – Reference	Weightronics, National Physical Laboratory, INDIA	36413	NHL/GN-CH/EQ165	From 200g to 1mg	-	Calibration Room	200g, 100g, 50g, 20g, 10g, 5g, 2g, 1g, 500mg, 200mg, 100mg, 50mg,

								20 mg, 10mg, 5mg, 2mg, 1mg
26.	Weight Set (13 pieces)	Troemner	-	NHL/GN-CH/EQ159	From 100g to 5mg	-	Sample Receiving	5mg, 20mg, 50mg, 100mg, 500mg, 2g, 5g, 10g, 50g, 20g, 100g
27.	Immersion thermometer (Reference)	Brannan	-	*NHL/CH-GN/EQ042*	0-210°C	1°C	Calibration Room	0-210°C
28.	Immersion thermometer	Koehler	-	NHL/CH-FC/EQ061	-30 - 50°C	1°C	Food Chemistry 2	<-18°C
29.	Thermometer	Brannan	-	NHL/CH-WC/EQ122	-10 to 110°C	1°C	Water Chemistry	2-8°C
30.	Thermometer COD pin metal circular	Hach USA	-	NHL/CH-WC/EQ129	0 to 200 °C	2°C	Water Chemistry	1%
31.	Thermometer	Thermo restfrei	-	NHL/CH-GN/EQ164	-30 - 50°C	1°C	Sample Receiving	<-18°C
32.	Thermometer	Thermo restfrei	-	NHL/CH-GN/EQ170	-30 - 50°C	1°C	Sample Receiving	2-8°C
33.	Thermometer (Reference)	Thermo restfrei	-	NHL/CH-GN/EQ157	-30 - 50°C	1°C	Calibration Room	<-18°C
34.	Thermometer (37°C)	Thermo Scientific/ERTCO	14983	NHL/MB-FM/EQ088	18 to 50°C	0.5°C	Food Micro	18 to 50°C
35.	Thermometer (44°C)	Thermo Scientific/ERTCO	15121	NHL/MB-FM/EQ085	18 to 50°C	0.5°C	Food Micro	18 to 50°C
36.	Incubator	Sanyo MIR 262	60101630	NHL/MB-WM/EQ003	37°C±1	0.1°C	Water Micro	37°C±1
37.	Incubator	Sanyo MIR 262	40608373	NHL/MB-WM/EQ004	44°C±0.5	0.1°C	Water Micro	44.5°C±0.5
38.	Incubator	Sanyo MIR 262	50506901	NHL/MB-WM/EQ005	22°C±2	0.1°C	Water Micro	22°C±2
39.	Incubator	Sanyo MIR 262	60101631	NHL/MB-FM/EQ094	37°C±2	0.1°C	Food Micro	37°C±2
40.	Incubator	Gallenkamp IPR 075XX 1.5	SG 98/04/368	NHL/MB-FM/EQ001	30°C±2	0.1°C	Food Micro	30°C±2
41.	Incubator	Gallenkamp IPR 075XX 1.5	SG 97/04/367	NHL/MB-FM/EQ002	44°C±2	0.1°C	Food Micro	44°C±2
42.	Water Bath	Julabo(SW22)	10115548	NHL/MB-MR/EQ013	41.5°C±2	0.1°C	Food Micro	41.5°C±2
43.	Water Bath	Julabo(SW23)	10150645	NHL/MB-AR/EQ076	100°C±2	0.1°C	Food Micro	100°C±2
44.	Autoclave	Sanyo MLS-2420U	840090	NHL/MB-AR/EQ092	121°C	-	Autoclave Room	121°C/15lbs±3
45.	Stomacher	Seward 400	47290	NHL/MB-FM/EQ075	-	-	Food Micro	-
46.	Finnpipette 2-10 mL	Finnpipette	V21240	NHL/MB-WM/EQ105	2-10ml	0.1mL	Water Microbiology	2-10mL