PAL SYSTEM
Ingenious sample handling

PAL3 Autosampler Series II
Accessories & Smart Consumables

Content

Tools & Syringes

Liquid Tools & Syringes

Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-TH-D757	Universal Liquid Syringe Tool for syringes of 0.5µL, 1.2µL, 5µL, 10µL, 25µL, 50µL or 100µL with a needle length of 57mm Syringes not included, requires firmware version 1.3.0 or higher	X	X
PAL3-TH-D785	Universal Liquid Syringe Tool for syringes of 0.5µL, 1.2µL, 5µL, 10µL, 25µL, 50µL or 100µL with a needle length of 85mm Syringes not included, requires firmware version 1.3.0 or higher	X	X
PAL3-TH-D857	Universal Liquid Syringe Tool for syringes of 250µL, 500µL or 1000µL with a needle length of 57mm Syringes not included, requires firmware version 1.3.0 or higher	X	X
PAL3-TH-D885	Universal Liquid Syringe Tool for syringes of 250µL, 500µL or 1000µL with a needle length of 85mm Syringes not included, requires firmware version 1.3.0 or higher	X	X
PAL3-TH-D1857	Liquid Syringe Tool for a syringe of 2500µL, 5000µL, 10000µL with a needle length of 57mm Syringe not included, requires firmware version 1.3.0 or higher	X	X

Recommended GC Syringes:

Part No.	Description	Tool compatibility
SF0-57-B-26P-CO	0.5µL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, gauge 26P, scale length 27mm, Point Style conical	D7/57
SE1-B-57-23P-CO	1µL Smart Syringe body for exchangeable needles for Tool D8/57, Plunger in Needle, Needle length 57mm, gauge 23P, scale length 27mm, Point Style conical, Needle Flange Type NIP_1	D8/57
SF1-57-B-26P-CO	1.2µL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, gauge 26P, scale length 36mm, Point Style conical	D7/57
SF1-85-B-26P-CO	1.2µL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, gauge 26P, scale length 36mm, Point Style conical	D7/85
SF10-57-M-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, metal plunger, gauge 26S, scale length 54mm, Point Style conical	D7/57
SF10-57-M-23S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, metal plunger, gauge 23S, scale length 54mm, Point Style conical	D7/57
SF10-57-T-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF10-57-T-23S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 23S, scale length 60mm, Point Style conical	D7/57
SF10-85-M-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, metal plunger, gauge 26S, scale length 54mm, Point Style conical	D7/85
SF10-85-T-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SF25-57-T-26S-CO	25uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF25-85-T-26S-CO,	25uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SF50-57-T-26S-CO	50uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF50-85-T-26S-CO	50uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Part No.	Description	Tool compatibility
SF100-57-T-23S-CO	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 23S, scale length 60mm, Point Style conical	D7/57
SF100-57-T-26S-CO	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF100-85-T-26S-CO	100uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SF250-57-T-26-CO	250uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/57
SF250-85-T-26-CO	250uL Smart Syringe with fixed needle for Tool D8/85: Needle length 85mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/85
SF500-57-T-26-CO	500uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/57
SF1000-57-T-23-CO	1000uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 23, scale length 60mm, Point Style conical	D8/57

Syringe Bodies and exchangeable Needles can be found on page 22-25

Recommended LC Syringes

Part No.	Description	Tool compatibility
SF10-57-T-22S-FL	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat	D7/57
SFX25-57-T-22S-FL	25uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat, x-Type	D7/57
SFX100-57-T-22-FL	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat, x-Type	D7/57
SFX100-57-T-22S-FL	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat, x-Type	D7/57
SF250-57-T-22-FL	250uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57
SF500-57-T-22-FL	500uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57
SF1000-57-T-22-FL	1000uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57

Syringe Bodies and exchangeable Needles can be found on page 22-25

Recommended Prep Syringes

Part No.	Description	Tool compatibility
SC2500-57-T-19-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 19, scale length 60mm, Point Style flat	D18/57
SC2500-57-T-22-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D18/57
SC2500-57-PE-22-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, Polyethylene plunger, gauge 22, scale length 60mm, Point Style flat	D18/57
SC5000-57-T-19-FL	5000uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 19, scale length 60mm, Point Style flat	D18/57
SC5000-57-T-22-FL	5000uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D18/57

Syringe Bodies and exchangeable Needles can be found on page 22-25

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Headspace Tools & Syringes

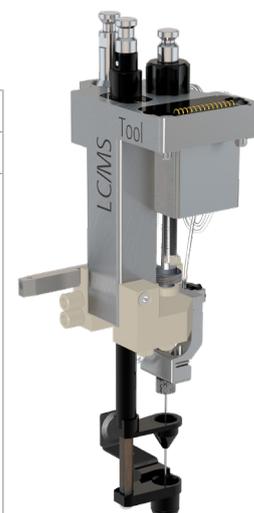| Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-TH-HS1000	Headspace Syringe Tool for a 1000µL syringe with a needle length of 65mm Syringe not included	X	X
PAL3-TH-HS2500	Headspace Syringe Tool for a 2500µL syringe with a needle length of 65mm Syringe not included	X	X
PAL3-TH-HS5000	Headspace Syringe Tool for a 5000µL syringe with a needle length of 65mm Syringe not included	X	X

Recommended GC Syringes:

Part No.	Description	Tool compatibility
SH1000-65-T-23-SP	1000µL Smart Headspace Syringe with fixed needle for Tool HS1000, PTFE Plunger, Needle length 65mm, Gauge 23, Point Style Sideport	HS1000
SH2500-65-T-23-SP	2500µL Smart Headspace Syringe with fixed needle for Tool HS2500, PTFE Plunger, Needle length 65mm, Gauge 23, Point Style Sideport	HS2500
SH5000-65-T-23-SP	5000µL Smart Headspace Syringe with fixed needle for Tool HS5000, PTFE Plunger, Needle length 65mm, Gauge 23, Point Style Sideport	HS5000
Gluefree option		
SHGF2250-T-23-SP	2250µl Smart Glue Free Headspace Syringe with fixed needle for Tool HS2500, PTFE plunger, needle gauge 23, Point Style Sideport	HS2500
SHGF4500-T-23-SP	4500µl Smart Glue Free Headspace Syringe with fixed needle for Tool HS5000, PTFE plunger, needle gauge 23, Point Style Sideport	HS5000

Syringe Bodies and exchangeable Needles can be found on page 22-25

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

LCMS Tool

Part No.	Description	Compatible with:	
		RTC	RSI

PAL3-TH-SLCMS-P	LCMS-P Tool consisting of:
	  1 pc LCMS-P Tool incl. Smart Syringe, Needle and FEP Loop
	  1 pc Pump Module and Connection Cable
	  1 pc PFA Transfer tube 1/16"
	  2 pc Solvent bottle 1000ml
	  2 pc Aspirating tube 1/8"
	
	Attention:
	LCMS Wash Module not included. Requires Check Valve Kit. Compatible with all PAL RTC/PAL RSI models from FW version 2.1 or higher.
	Requires firmware version 3.0 or higher and PAL RTC/PAL RSI Series II for Smart functionality
		X	X

Recommended Syringes and Needles

Part No.	Description	Tool compatibility
SLCMS-100-PE	100µl Smart LCMS Syringe for LCMS Tool, PE Plunger, Gastight, Scale Length 60 mm, Thread 1/4-28 UNF, Removable Needle not included	LCMS
SLCMS-100-T	100µl Smart LCMS Syringe for LCMS Tool, PTFE Plunger, Gastight, Scale Length 60 mm, Thread 1/4-28 UNF, Removable Needle not included	LCMS
PAL3-LCMS-Ndl	Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut)	LCMS
PAL3-LCMS-Ndl-C	Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut)	LCMS
PAL3-LCMS-Ndl-T	Titanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (incl. Needle Retaining Nut)	LCMS

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Pipette Tools

Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-TH-Pip1000	Pipette tool for 1000uL Tips To use with PAL Disposable Tips: PAL3-PipTip-1000 and PAL3-Pip-Tip-1000F Tips and Racks for tips are not included requires firmware version 2.4.x or higher and PAL RTC	X	
PAL3-TH-Pip200	Pipette tool for 200uL Tips To use with PAL Disposable Tips: PAL3-PipTip-200 and PAL3-Pip-Tip-200F Tips and Racks for tips are not included requires firmware version 2.4.x or higher and PAL RTC	X	

Recommended Pipette Tips:

Part No.	Description	Tool compatibility
PAL3-PipTip-1000	Pipette Tips 1000uL without Filter 10 pcs with 96 tips each	TH-Pip1000
PAL3-PipTip-1000F	Pipette Tips 1000uL with Filter 10 pcs with 96 tips each	TH-Pip1000
PAL3-PipTip-200	Pipette Tips 200uL without Filter 10 pcs with 96 tips each	TH-Pip200
PAL3-PipTip-200F	Pipette Tips 200uL with Filter 10 pcs with 96 tips each	TH-Pip200

Recommended Rack for Pipette Tips:

Part No.	Description
PAL3-Rack-Pip-Tip	Tip rack for 96 PAL pipette tips Tips not included

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Dilutor Tool

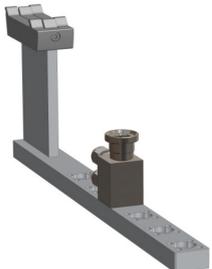| Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-TH-Dilutor	Tool Holder for Dilutor Option Attention: Does not include needles and tubing requires firmware version 2.1.0 or higher and Dilutor Option	X	X

Recommended syringes:

Part No.	Description	Tool compatibility
PAL3-SYDIL-21834	100µL Dilutor Syringe, Scale 60mm, PTFE Plunger, ZDV (Zero Dead Volume)	Dilutor
PAL3-SYDIL-21835	1mL Dilutor Syringe, Scale 60mm, PTFE Plunger, ZDV (Zero Dead Volume)	Dilutor
PAL3-SYDIL-21836	5mL Dilutor Syringe, Scale 60mm, PTFE Plunger, ZDV (Zero Dead Volume)	Dilutor
PAL3-SYDIL-21837	10mL Dilutor Syringe, Scale 60mm, PTFE Plunger, ZDV (Zero Dead Volume)	Dilutor

Modules

Part No.	Description	Compatible with:			
		RTC	RSI	LSI	
PAL3-Agitator	Agitator for the incubation and agitation of up to 6x 20mL vials	X	X	X	
PAL3-BarcodeReader	Barcode Reader with 2 active laser scanners for all standard vials containing 1 dimension (1-D) barcode in a horizontal orientation	X	X	X	
PAL3-Centrifuge-2mL	Centrifuge for the centrifugation of up to 8x 2mL vials Maximum speed of 7200 rpm. this corresponds to a RCF of 5000 x g	X	X	X	
PAL3-Centrifuge-Combi	Centrifuge for the centrifugation of 2x 10mL vials, 2x 20mL vials or up to 4x 2mL vials Maximum speed of 4800 rpm. this corresponds to a RCF of 2000 x g	X	X	X	
PAL3-Decapper	Decapper Module for opening and closing of initially closed 2mL, 10mL or 20mL vials PALsystem Vials with re-cappable vial caps are highly recommended for multiple opening and closing procedures within a workflow Requires FW Version 2.4 or higher	X			
PAL3-DilutorMulti	Dilutor Module, consisting of: 1 pc Dilutor module 1 pc Connection cable 1 pc Dilutor Tool 1 pc Dilutor syringe 1mL 1 pc PFA Transfer tube 1/16" 5 pc Solvent bottle 1000ml 5 pc Aspirating tube 1/8" requires firmware version 2.1.0 or higher	X	X		
PAL3-DilutorSingle	Dilutor Module, consisting of: 1 pc Dilutor module 1 pc Connection cable 1 pc Dilutor Tool 1 pc Dilutor syringe 1mL 1 pc PFA Transfer tube 1/16" 1 pc Solvent bottle 1000ml 1 pc Aspirating tube 1/8" requires firmware version 2.1.0 or higher	X	X		
PAL3-FlowCell	Flow-Cell Module to accommodate up to 6 flow cells, consisting of: 1 pc Holder 88mm 1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4" 5 pcs Inlet Septa	X	X		

Part No.	Description	Compatible with:			
		RTC	RSI	LSI	
PAL3-HeatexStirrer	Heatex Stirrer for intensive heating and stirring of 1x 20mL vial without stir bar Specific Heatex Stirrer insert for 10mL vial available (not included) requires firmware version 2.3 or higher (use in combination with existing PAL3-Agitator)	X	X		
PAL3-MHE-Module	Multiple Headspace Extraction Module, consisting of MHE module, MHE tool and MHE needle Gauge 22/5	X	X		
PAL3-SPME-ArrowCond	SPME Conditioning Module for the conditioning of SPME Arrows and SPME fibers Includes a second position for conditioning a replacement SPME arrow or SPME fiber requires firmware version 2.3 or higher	X	X		
PAL3-ValveDrive-R	Valve Drive Module for Rheodyne valve (without valve) consisting of: 1 pc Valve Drive Module 1 pc PAL Bus connection cable requires firmware version 1.4.0 or higher	X	X	X	
PAL3-ValveDrive-V	Valve Drive Module for Valco valve (without valve) consisting of: 1 pc Valve Drive module 1 pc PAL Bus connection cable requires firmware version 1.4.0 or higher	X	X	X	
PAL3-VortexMixer	Vortex Mixer for the intensive mixing of 1x 2mL, 10 or 20mL vials with an agitation speed between 0-2000 rpm	X	X	X	
PAL3-ParkStation-RTC	Park Station for the storage and robotic tool change of up to three PALtools like Liquid, HS, SPME, consisting of: 1 pc Park Station 1 pc Electrical connection cable	X			
PAL3-SolventModule	Solvent Module for 3x 100mL solvent bottles	X	X	X	
PAL3-WashFast	Fast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of: 1 pc Wash Module with two wash positions and one Waste position 1 pc Pump Module with two solvent pumps 2 pc 1 liter solvent bottles with tubings and frits 1 pc PALbus connection cable requires firmware version 2.0.1 or higher	X	X	X	

Part No.	Description	Compatible with:			
		RTC	RSI	LSI	

PAL3-WashFast-HF	HF Fast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of:
	  1 pc Wash Module with two wash positions and one Waste position
	  1 pc Pump Module with two solvent pumps
	  2 pc 1 liter solvent bottles with tubings and frits
	  1 pc PALbus connection cable
	Requires firmware version 2.4.x or higher
		X	X	X	

PAL3-WashLarge	Large Wash Module for 2x 100mL solvent vials and one waste position	X	X	X	
PAL3-WashLCMS	Wash Module for LCMS Tool. with two wash positions and one waste position Requires FW 2.0.x or higher	X	X		
PAL3-WashStd	Standard Wash Module for up to 4x 10mL solvent vials and 1x 10mL waste vial	X	X	X	
PAL3-Terminal	Terminal for PAL3 Autosampler Systems	X	X	X	

Tray Holders, Stacks and Racks

Part No.	Description	Compatible with:			
		RTC	RSI	LSI	
PAL3-LiqCooler	Tray Holder and sample tray for housing up to 32 vials of 10/20ml in the temperature range between 4°C- 70°C External circulator bath for heating/cooling not included	X	X	X	
PAL3-Trayholder	Tray Holder for up to 3 different MTP, DW plates or sample racks VT12, VT15, VT54, VT70 or 1 sample rack R60	X	X	X	
PAL3-Trayplate	Tray Plate for 3 microtiter / deepwell plates or racks (VT15, VT54 or VT70)	X	X	X	
PAL3-PeltierStack12MT	Peltier Stack 12MT 4°C- 40°C for 12pcs Standard Microtiter Plates Including Power Supply and cables requires firmware version 1.5.0 or higher	X	X	X	
PAL3-PeltierStack2DW	Peltier Stack 2 DW 4°C- 40°C for 2pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks Including Power Supply and cables requires firmware version 1.4.0 or higher	X	X	X	
PAL3-PeltierStack6DW	Peltier Stack 6DW 4°C- 40°C for 6pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks Including Power Supply and cables requires firmware version 1.5.0 or higher	X	X	X	
PAL3-Stack12MT	Stack 12MT for 6pcs Standard Microtiter plates requires firmware version 2.2.0 or higher	X	X	X	
PAL3-Stack6DW	Stack 6DW for 6pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks requires firmware version 2.2.0 or higher	X	X	X	
PAL3-Kit-VT15	Sample Rack for 15 vials 10/20mL. Vials are not included,Pk of 3 pcs	X	X	X	
PAL3-Kit-VT54	Sample Rack for 54 vials 2mL. Vials are not included, Pk of 3 pcs	X	X	X	
PAL3-Rack-R60	Sample Rack for 60 vials of 10/20mL, Aluminum Vials not included	X	X	X	
PAL3-Rack-VT12	Sample Rack for 12 vials of 40mL. Vials are not included	X	X	X	
PAL3-Rack-VT15	Sample Rack for 15 vials of 10/20mL. Vials are not included	X	X	X	
PAL3-Rack-VT54	Sample Rack for 54 vials of 2mL. Vials are not included	X	X	X	
PAL3-Rack-VT70	Sample Rack for 70 vials of 1mL. Vials are not included	X	X	X	

PAL3 ITEX

ITEX Kit

Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-SITEX-Kit	PAL3 ITEX Tool, including: 1 pc Smart ITEX Syringe 1.3mL (SITEX-1300-T) 2 pc ITEX Trap TENAX TA 80/100 mesh (PAL3-ITEX-Trap-TXTA100) Compatible with all PAL RTC/PAL RSI models from FW version 2.3. or higher Requires firmware version 3.0 or higher and PAL RTC/PAL RSI Series II for Smart functionality	X	X

ITEX Traps

Part No.	Description	Tool compatibility
PAL3-ITEX-Trap-Carb-S3	PAL3 ITEX Trap Carbosieve SIII -60/ 80 mesh	ITEX
PAL3-ITEX-Trap-Carb1000	PAL3 ITEX Trap Carboxen 1000 -60/ 80 mesh	ITEX
PAL3-ITEX-Trap-CarbC	PAL3 ITEX Trap Carbopack - C 80/100 mesh	ITEX
PAL3-ITEX-Trap-Mix-1	PAL3 ITEX Trap Mix1 Tenax TA : Carboxen1000 (Bottom: Top - 1: 1)	ITEX
PAL3-ITEX-Trap-Mix-2	PAL3 ITEX Trap Mix2 Carbopack C : Carbosieve SIII (Bottom: Top - 2: 1)	ITEX
PAL3-ITEX-Trap-Mix-3	PAL3 ITEX Trap Mix3 Tenax GR : Carbosieve SIII (Bottom: Top - 1: 1)	ITEX
PAL3-ITEX-Trap-TxGR	PAL3 ITEX Trap Tenax GR - 80/100 mesh	ITEX
PAL3-ITEX-Trap-TXTA100	PAL3 ITEX Trap Tenax TA 80/100 mesh	ITEX

ITEX Syringe

Part No.	Description	Tool compatibility
SITEX-1300-T	Smart ITEX Syringe 1300µl for Tool ITEX, ITEX Trap not included.	Itex

Smart Syringe & Needle Portfolio

250 µL

Liquid Smart Syringes - Fixed Needle

Part No.	Description	Tool compatibility
SF0-57-B-26P-CO	0.5µL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, gauge 26P, scale length 27mm, Point Style conical	D7/57
SF1-57-B-26P-CO	1.2µL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, gauge 26P, scale length 36mm, Point Style conical	D7/57
SF1-85-B-26P-CO	1.2µL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, gauge 26P, scale length 36mm, Point Style conical	D7/85
SF10-57-M-23S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, metal plunger, gauge 23S, scale length 54mm, Point Style conical	D7/57
SF10-57-M-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, metal plunger, gauge 26S, scale length 54mm, Point Style conical	D7/57
SF10-57-T-22S-FL	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat	D7/57
SF10-57-T-23S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 23S, scale length 60mm, Point Style conical	D7/57
SF10-57-T-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF10-85-M-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, metal plunger, gauge 26S, scale length 54mm, Point Style conical	D7/85
SF10-85-T-26S-CO	10uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SF10-85-M-23S-CO	10uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, metal plunger, gauge 23S, scale length 54mm, needle tip conical	D7/85
SF25-57-T-26S-CO	25uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF25-85-T-26S-CO	25uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SFX25-57-T-22S-FL	25uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat, x-Type	D7/57
SF50-57-T-26S-CO	50uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF50-85-T-26S-CO	50uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SF100-57-T-26S-CO	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/57
SF100-57-T-23S-CO	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 23S, scale length 60mm, Point Style conical	D7/57
SF100-85-T-26S-CO	100uL Smart Syringe with fixed needle for Tool D7/85: Needle length 85mm, PTFE plunger, gauge 26S, scale length 60mm, Point Style conical	D7/85
SFX100-57-T-22-FL	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat, x-Type	D7/57
SFX100-57-T-22S-FL	100uL Smart Syringe with fixed needle for Tool D7/57: Needle length 57mm, PTFE plunger, gauge 22S, scale length 60mm, Point Style flat, x-Type	D8/57
SF250-57-T-26-CO	250uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/57
SF250-85-T-26-CO	250uL Smart Syringe with fixed needle for Tool D8/85: Needle length 85mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/85
SF250-57-T-22-FL	250uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57
SF500-57-T-22-FL	500uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Liquid Smart Syringes - Fixed Needle

Part No.	Description	Tool compatibility
SF500-57-T-26-CO	500uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 26, scale length 60mm, Point Style conical	D8/57
SF1000-57-T-22-FL	1000uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D8/57
SF1000-57-T-23-CO	1000uL Smart Syringe with fixed needle for Tool D8/57: Needle length 57mm, PTFE plunger, gauge 23, scale length 60mm, Point Style conical	D8/57
SC2500-57-PE-22-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, Polyethylene plunger, gauge 22, scale length 60mm, Point Style flat	D18/57
SC2500-57-T-19-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 19, scale length 60mm, Point Style flat	D18/57
SC2500-57-T-22-FL	2500uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D18/57
SC5000-57-T-19-FL	5000uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 19, scale length 60mm, Point Style flat	D18/57
SC5000-57-T-22-FL	5000uL Smart Syringe with fixed needle for Tool D18/57: Needle length 57mm, PTFE plunger, gauge 22, scale length 60mm, Point Style flat	D18/57

LCMS Smart Syringes - without Needle

Part No.	Description	Tool compatibility
SLCMS-100-PE	100µl Smart LCMS Syringe for LCMS Tool, PE Plunger,|Gastight, Scale Length 60 mm, Thread 1/4-28 UNF Removable Needle not included	LCMS
SLCMS-100-T	100µl Smart LCMS Syringe for LCMS Tool, PTFE Plunger,|Gastight, Scale Length 60 mm, Thread 1/4-28 UNF Removable Needle not included	LCMS
SLCMS-250-PE	250µl Smart LCMS Syringe for LCMS Tool, PE Plunger,|Gastight, Scale Length 60 mm, Thread 1/4-28 UNF Removable Needle not included	LCMS
SLCMS-250-T	250µl Smart LCMS Syringe for LCMS Tool, PTFE Plunger,|Gastight, Scale Length 60 mm, Thread 1/4-28 UNF Removable Needle not included	LCMS

ITEX Smart Syringes - without Needle

Part No.	Description	Tool compatibility
SITEX1300-T	Smart ITEX Syringe 1300µl for Tool ITEX, ITEX Trap not included.	ITEX

Liquid Smart Syringes - Exchangeable Needle

Part No.	Description	Tool compatibility
SE0-B-57-23P-CO	0.5µL Smart Syringe body for exchangeable needles for Tool D8/57, Plunger in Needle, Needle length 57mm, gauge 23P, scale length 27mm, Point Style conical, Needle Flange Type NIP_0	D8/57
SE1-B-57-23P-CO	1µL Smart Syringe body for exchangeable needles for Tool D8/57, Plunger in Needle, Needle length 57mm, gauge 23P, scale length 27mm, Point Style conical, Needle Flange Type NIP_1	D8/57

Liquid Smart Syringes - Exchangeable Needle

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Part No.	Description	Tool compatibility
SE5-M	5µL Smart Syringe body for exchangeable needles for Tool D8, Metal Plunger, Needle Flange Type F_5, Needle not included	D8/57
SE10-M	10µL Smart Syringe body for exchangeable needles for Tool D8, Metal Plunger, Needle Flange Type F_10, Needle not included	D8/57
SE10-T	10µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_10, Needle not included	D8/57
SE25-T	25µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_25, Needle not included	D8/57
SE50-T	50µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_25, Needle not included	D8/57
SE100-T	100µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_25, Needle not included	D8/57
SE250-T	250µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_25, Needle not included	D8/57
SE500-T	500µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_25, Needle not included	D8/57
SE1000-T	1000µL Smart Syringe body for exchangeable needles for Tool D8, PTFE Plunger, Needle Flange Type F_1000, Needle not included	D8/57
SCE2500-T	2500µL Smart Syringe body for exchangeable needles for Tool D18, PTFE Plunger, Needle Flange Type F_1000, Needle not included	D18/57
SCE5000-T	5000µL Smart Syringe body for exchangeable needles for Tool D18, PTFE Plunger, Needle Flange Type F_1000, Needle not included	D18/57
SE10000-T	10000µL Smart Syringe body for exchangeable needles for Tool D18, PTFE Plunger, Needle Flange Type F_10000, Needle not included	D18/57

Headspace Smart Syringes - Fixed Needle - Needle Fixation with Glue

Part No.	Description	Tool compatibility
SH1000-65-T-23-SP	1000µL Smart Headspace Syringe with fixed needle for Tool HS1000, PTFE Plunger, Needle length 65mm, Gauge 23, Point Style Sideport	HS1000
SH2500-65-T-23-SP	2500µL Smart Headspace Syringe with fixed needle for Tool HS2500, PTFE Plunger, Needle length65mm, Gauge 23, Point Style Sideport	HS2500
SH5000-65-T-23-SP	5000µL Smart Headspace Syringe with fixed needle for Tool HS5000, PTFE Plunger, Needle length 65mm, Gauge 23, Point Style Sideport	HS5000

Headspace Smart Syringes - Fixed Needle - Glue Free Needle Fixation

Part No.	Description	Tool compatibility
SHGF2250-T-23-SP	2250µl Smart Glue Free Headspace Syringe with fixed needle for Tool HS2500, PTFE plunger, needle gauge 23, Point Style Sideport	HS2500
SHGF4500-T-23-SP	4500µl Smart Glue Free Headspace Syringe with fixed needle for Tool HS5000, PTFE plunger, needle gauge 23, Point Style Sideport	HS5000

Headspace Smart Syringes - Exchangeable Needle

Part No.	Description	Tool compatibility
SHE1000-T	1000µL Smart Headspace Syringe for exchangeable needles for Tool HS1000, PTFE Plunger, Needle Flange Type HS_1000 - Needle not included!	HS1000
SHE2500-T	2500µL Smart Headspace Syringe for exchangeable needles for Tool HS2500, PTFE Plunger, Needle Flange Type HS_1000 - Needle not included!	HS2500
SHE5000-T	5000µL Smart Headspace Syringe for exchangeable needles for Tool HS5000, PTFE Plunger, Needle Flange Type HS_1000 - Needle not included!	HS5000

CAUTION: SYRINGES FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE

Liquid Smart Syringe Needles - Needle Flange Type F_5

Part No.	Description	Syringe compatibility
ND5-57-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND5 Body Type 5µL Liquid Syringe, Needle Length 57mm, Gauge 23S, Point Style conical	SE5-M
ND5-57-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND5 Body Type 5µL Liquid Syringe, Needle Length 57mm, Gauge 26S, Point Style conical	SE5-M
ND5-85-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND5 Body Type 5µL Liquid Syringe, Needle Length 85mm, Gauge 23S, Point Style conical	SE5-M
ND5-85-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND5 Body Type 5µL Liquid Syringe, Needle Length 85mm, Gauge 26S, Point Style conical	SE5-M

Liquid Smart Syringe Needles - Needle Flange Type F_10

Part No.	Description	Syringe compatibility
ND10-57-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND10 Body Type 10µL Liquid Syringe, Needle Length 57mm, Gauge 23S, Point Style conical	SE10-M, SE10-T
ND10-57-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND10 Body Type 10µL Liquid Syringe, Needle Length 57mm, Gauge 26S, Point Style conical	SE10-M, SE10-T
ND10-85-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND10 Body Type 10µL Liquid Syringe, Needle Length 85mm, Gauge 23S, Point Style conical	SE10-M, SE10-T
ND10-85-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND10 Body Type 10µL Liquid Syringe, Needle Length 85mm, Gauge 26S, Point Style conical	SE10-M, SE10-T

Liquid Smart Syringe Needles - Needle Flange Type F_25

Part No.	Description	Syringe compatibility
ND25-57-22S-FL	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 57mm, Gauge 22S, Point Style flat	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-57-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 57mm, Gauge 23, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-57-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 57mm, Gauge 23S, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-57-26-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 57mm, Gauge 26, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-57-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 57mm, Gauge 26S, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-85-22-FL	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 22, Point Style flat	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-85-22S-FL	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 22S, Point Style flat	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T

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Liquid Smart Syringe Needles - Needle Flange Type F_25

Part No.	Description	Syringe compatibility
ND25-85-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 23, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-85-23S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 23S, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-85-26-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 26, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T
ND25-85-26S-CO	Exchangeable needle for liquid syringes with Needle Flange type ND25 Body Type 25, 50, 100, 250 or 500µL Liquid Syringe, Needle Length 85mm, Gauge 26S, Point Style conical	SE25-T, SE50-T, SE100-T. SE250-T, SE500-T

Liquid Smart Syringe Needles - Needle Flange Type F_1000

Part No.	Description	Syringe compatibility
ND1000-57-22-FL	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 57mm, Gauge 22, Point Style flat. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-57-22-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 57mm, Gauge 22, Point Style side port - Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-57-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 57mm, Gauge 23, Point Style conical - Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-57-23-SP	Exchangeable needle for liquid syringes with Needle Flange type F_1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 57mm, Gauge 23, Point Style side port. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-57-26-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 57mm, Gauge 26, Point Style conical. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-19-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 19, Point Style side port. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-22-FL	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 22, Point Style flat. Caution: not for Headspace syringess	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-22-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 22, Point Style side port. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 23, Point Style conical - Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-23-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 23, Point Style side port. Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T
ND1000-85-26-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000µL Liquid Syringe, Needle Length 85mm, Gauge 26, Point Style conical - Caution: not for Headspace syringes	SE1000-T, SCE2500-T, SCE5000-T

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Liquid Smart Syringe Needles - Needle Flange Type F_10000

Part No.	Description	Syringe compatibility
ND10000-57-19-SP	Exchangeable needle for liquid syringes with Needle Flange type ND10000 Body Type 10000μL Liquid Syringe, Needle Length 57mm, Gauge 19, Point Style side port	SE10000-T
ND10000-57-22-FL	Exchangeable needle for liquid syringes with Needle Flange type ND10000 Body Type 10000μL Liquid Syringe, Needle Length 57mm, Gauge 22, Point Style flat	SE10000-T
ND10000-57-22-SP	Exchangeable needle for liquid syringes with Needle Flange type ND10000 Body Type 10000μL Liquid Syringe, Needle Length 57mm, Gauge 22, Point Style side port	SE10000-T
ND10000-57-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND10000 Body Type 10000μL Liquid Syringe, Needle Length 57mm, Gauge 23, Point Style conical	SE10000-T
ND10000-57-23-SP	Exchangeable needle for liquid syringes with Needle Flange type ND10000 Body Type 10000μL Liquid Syringe, Needle Length 57mm, Gauge 23, Point Style side port	SE10000-T

Headspace Smart Syringe Needles - Needle Flange Type HS_1000

Part No.	Description	Syringe compatibility
NDH1000-65-22-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000μL Headspace Syringe, Needle Length 65mm, Gauge 22, Point Style side port	SHE1000-T, SHE2500-T, SHE5000-T
NDH1000-65-23-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000μL Headspace Syringe, Needle Length 65mm, Gauge 23, Point Style conical	SHE1000-T, SHE2500-T, SHE5000-T
NDH1000-65-23-SP	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000μL Headspace Syringe, Needle Length 65mm, Gauge 23, Point Style side port	SHE1000-T, SHE2500-T, SHE5000-T
NDH1000-65-26-CO	Exchangeable needle for liquid syringes with Needle Flange type ND1000 Body Type 1000, 2500 or 5000μL Headspace Syringe, Needle Length 65mm, Gauge 26, Point Style conical	SHE1000-T, SHE2500-T, SHE5000-T

Smart SPME Arrow / Smart SPME Fiber

PAL SPME Kit

Part No.	Description	Compatible with:	
		RTC	RSI
PAL3-SPME-SFib-Kit	SPME Kit, consisting of: 1 pc SPME Tool 1 pc SPME Fiber Assortment Kit (SFIB-SEL5-S2) 1 pc SPME Performance Evaluation Mix	X	X

PAL SPME Fibers

Part No.	Description	Tool compatibility
SFIB-A-85/10-P3	Smart SPME fiber Acrylate (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcs	SPME Fiber
SFIB-C-WR-95/10-P3	Smart SPME fiber C-WR/PDMS (Carbon Wide Range / Polydimethylsiloxane) Fiber thickness 95µm, Fiber length 10mm, color code: dark blue, pack of 3pcs	SPME Fiber
SFIB-DVB-65/10-P3	Smart SPME fiber DVB/PDMS (Divinylbenzene / Polydimethylsiloxane) Fiber thickness 65µm, Fiber length 10mm color code: violet, pack of 3pc	SPME Fiber
SFIB-DVB/C-WR-80/10-P3	Smart SPME fiber DVB/C-WR/PDMS (Divinylbenzene / Carbon Wide Range / Polydimethylsiloxane) Fiber thickness 50/30µm, Fiber length 10mm color code: dark gray, pack of 3pc	SPME Fiber
SFIB-P-100/10-P3	Smart SPME fiber PDMS (Polydimethylsiloxane) Fiber thickness 100µm, Fiber length 10mm, color code: red, pack of 3pcs	SPME Fiber
SFIB-P-30/10-P3	Smart SPME fiber PDMS (Polydimethylsiloxane) Fiber thickness 30µm, Fiber length 10mm, color code: golden, pack of 3pcs	SPME Fiber
SFIB-P-7/10-P3	Smart SPME fiber PDMS (Polydimethylsiloxane) Fiber thickness 7µm, Fiber length 10mm, color code: green, pack of 3pcs	SPME Fiber
SFIB-SEL5-S1	Collection of five different Smart SPME fibers with fiber length of 10mm and fiber thickness of: PDMS: 7µm, 30µm & 100µm Acrylate: 85µm C-WR: 95µm	SPME Fiber
SFIB-SEL5-S2	Collection of five different Smart SPME fibers with fiber length of 10mm and fiber thickness of: PDMS: 100µm DVB: 65µm C-WR: 95µm Acrylate: 85µm DVB/C-WR/PDMS: 80µm	SPME Fiber

All PAL Smart SPME Fibers are available as single fiber, pack of 3 fibers and pack of 5 fibers

PAL SPME Arrows

Part No.	Description	Tool compatibility
SARR11-A-100/20-P3	Smart SPME Arrow 1.10mm: Acrylate (Polyacrylate) Phase thickness 100µm, Phase length 20mm, color code: grey, pack of 3 pcs	SPME Arrow
SARR11-C-WR-120/20-P3	Smart SPME Arrow 1.10mm: C-WR/PDMS (Carbon Wide Range) Phase thickness 120µm, Phase length 20mm, color code: light blue, pack of 3 pcs	SPME Arrow
SARR11-DVB-120/20-P3	Smart SPME Arrow 1.10mm: DVB/PDMS (Divinylbenzene) Phase thickness 120µm, Phase length 20mm, color code: violett, pack of 3 pcs	SPME Arrow
SARR11-DVB/CWR120/20-P3	Smart SPME Arrow 1.10mm: DVB/C-WR/PDMS (Divinylbenzene / Carbon Wide Range / Polydimethylsiloxane), Phase thickness 110µm, Phase length 20mm, color code: dark gray, pack of 3 pc	SPME Arrow
SARR11-P-100/20-P3	Smart SPME Arrow 1.10mm: PDMS (Polydimethylsiloxane) Phase thickness 100µm, Phase length 20mm, color code: red, pack of 3 pcs	SPME Arrow
SARR15-C-WR-120/20-P3	Smart SPME Arrow 1.50mm wide sleeve: C-WR/PDMS (Carbon Wide Range / Polydimethylsiloxane) Phase thickness 120µm, Phase length 20mm, color code: light blue, pack of 3 pcs	SPME Arrow
SARR15-DVB-120/20-P3	Smart SPME Arrow 1.50mm wide sleeve: DVB/PDMS (Divinylbenzene / Polydimethylsiloxane) Phase thickness 120µm, Phase length 20mm, color code: violett, pack of 3 pcs	SPME Arrow
SARR15-DVB/CWR120/20-P3	Smart SPME Arrow 1.50mm wide sleeve: DVB/C-WR/PDMS (Divinylbenzene/Carbon Wide Range/Polydimethylsiloxane) Phase thickness 110µm, Phase length 20mm, color code: dark gray, pack of 3 pc	SPME Arrow
SARR15-P-100/20-P3	Smart SPME Arrow 1.50mm wide sleeve: PDMS (Polydimethylsiloxane) Phase thickness 100µm, Phase length 20mm, color code: red, pack of 3 pcs	SPME Arrow
SARR15-P-250/20-P3	Smart SPME Arrow 1.50mm: PDMS (Polydimethylsiloxane) Phase thickness 250µm, Phase length 20mm, color code: black, pack of 3 pc	SPME Arrow
SARR1115-SEL5-S2	Collection of five different Smart SPME Arrows with phase length of 20mm: 1 pc Smart SPME Arrow 1.10mm Acrylate (Polyacrylate), Phase thickness 100µm 1 pc Smart SPME Arrow 1.10mm C-WR/PDMS (Carbon Wide Range / Polydimethyl-siloxane), Phase thickness 120µm 1 pc Smart SPME Arrow 1.10mm DVB/PDMS (Divinylbenzene / Polydimethylsiloxan), Phase thickness 120µm 1 pc Smart SPME Arrow 1.10mm PDMS (Polydimethylsiloxane), Phase thickness 100µm 1 pc Smart SPME Arrow 1.10mm DVB/Carbon WR/PDMS (Divinylbenzene / Carbon wide range / Polydimethylsiloxane), Phase thickness 110µm	SPME Arrow

All PAL Smart SPME Arrows are available as single Arrow, pack of 3 Arrows and pack of 5 Arrows

PAL SPME Arrow Accessories

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-AgiHeatex-Kit	Agitator and Heatex Stirrer Kit for SPME Arrow consisting of: 1 Agitator for the incubation and agitation of up to 6x 20mL vials 1 Heatex Stirrer for intensive heating and stirring of 1x 20mL vial without stir bar Specific Heatex Stirrer insert for 10mL vial available (not included) Specific Agitator insert for 10 mL vials available (not included) requires firmware version 2.3 or higher and adapters for 10mL vials	X	X	
PAL3-Heatex-Ins-10mL	Specific insert for the Heatex Stirrer to stir one 10mL vial	X	X	
PAL3-Heatex-Ins-2mL	Specific insert for the Heatex Stirrer to stir one 2mL vial	X	X	

ARR-Man-Inj-Kit	Manual Injection Kit for SPME Arrow, consisting of:
	  1x Manual SPME Holder
	  1x Manual SPME Extraction Guide
	  1x Manual SPME Injection Guide			

PAL3-SARR-Start-6890-LCh	Starter Kit Smart SPME Arrow for Agilent GC 6890 with large charcoal filter consisting of:
	1 Adaptation for the split/splitless injector with large charcoal filter of AGILENT GC 6890 (ARR-SSL-Inj-GC6890-LCh)
	2 SPME Arrow Liner for SSL Injector of Agilent GC 6890
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SARR-Start-6890-STD	Starter Kit Smart SPME Arrow for Agilent GC 6890 with standard Assy consisting of:
	1 Adaptation for the split/splitless injector with standard Assy of AGILENT GC 6890 (ARR-SSL-Inj-GC6890-STD)
	2 SPME Arrow Liner for SSL Injector of Agilent GC 6890
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SARR-Start-GC2010	Starter Kit Smart SPME Arrow for Shimadzu GC-2010 Plus consisting of:
	1x Adaptation for the split/splitless injector of SHIMADZU GC-2010 Plus (ARR-SSL-Inj-GC2010)
	  1 pc Liner Nut
	  1 pc Screw Cap
	  2 pcs SPME Arrow Liner
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
	(only for SHIMADZU GC-2010 Plus, not suitable for use with GC-2010)
		X	X	

PAL3-SARR-Start-GC2030	Starter Kit Smart SPME Arrow for Agilent GC 6890 with standard Assy consisting of:
	1 Adaptation for the split/splitless injector with standard Assy of AGILENT GC 6890 (ARR-SSL-Inj-GC6890-STD)
	2 SPME Arrow Liner for SSL Injector of Agilent GC 6890
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

All Starter Kits are compatible with all PAL RTC/PAL RSI models from FW version 2.3. or higher, Requiring firmware version 3.0 or higher and PAL RTC/PAL RSI Series II for Smart functionality

Part No.	Description	Compatible with:		
		RTC	RSI	LSI

PAL3-SARR-Start-GC7890	Starter Kit Smart SPME Arrow for Agilent GC 7890 consisting of:
	1 Adaptation for the split/splitless injector of AGILENT GC 7890 (ARR-SSL-Inj-GC7890)
	2 SPME Arrow Liner for SSL Injector of Agilent GC 7890
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SARR-Start-GC8890	Starter Kit Smart SPME Arrow for Agilent GC 8890 / 8860 consisting of:
	1 Adaptation for the split/splitless injector of AGILENT GC (ARR-SSL-Inj-GC8890)
	2 SPME Arrow Liner for SSL Injector of Agilent GC
	1x PAL Smart SPME Arrow kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SARR-Start-Tr1300	Starter Kit Smart SPME Arrow for Thermo GC Trace1300/1310 consisting of:
	1 Adaptation for the split/splitless injector of Thermo GC Trace1300/1310 (ARR-SSL-Inj-Trace1300)
	1 SPME Arrow Liner for SSL Injector of Thermo GC Trace1300/1310 Pk of 2 pcs
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SARR-Start-TrUltra	Starter Kit Smart SPME Arrow for Thermo GC TraceUltra consisting of:
	1 Adaptation for the split/splitless injector of Thermo GC TraceUltra (ARR-SSL-Inj-TraceUltra)
	2 SPME Arrow Liner for SSL Injector of Thermo GC TraceUltra
	1x PAL Smart SPME Arrow Kit (PAL3-SPME-SArr-Kit)
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
		X	X	

PAL3-SPME-SArr-Kit	Smart SPME Arrow Kit without GC Adaption Kit consisting of:
	  1 pc SPME Arrow Tool
	  1 pc Smart SPME Arrow Assortment Kit (SARR1115-SEL5-S2)
	  1 pc SPME Performance Evaluation Mix
	(Requires adaption kit for GC-specific injector)
		X	X	

All Starter Kits are compatible with all PAL RTC/PAL RSI models from FW version 2.3. or higher, Requiring firmware version 3.0 or higher and PAL RTC/PAL RSI Series II for Smart functionality

PAL SPME Arrow Liner

Part No.	Description
ARR-Liner-CondModule	Liner for SPME Arrow Conditioning Module, Pk of 3 pcs
ARRLIN13-GC2010-3	SPME Arrow Liner ID 1.3mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs Only for SMPE Arrow OD 1.1mm
ARRLIN13-GC6890-3	SPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs Only for SPME Arrow with OD 1.1mm
ARRLIN13-GC7890-3	SPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs Only for SMPE Arrow with OD 1.1mm
ARRLIN13-Trace1300-3	SPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs Only for SPME Arrow with OD 1.1mm
ARRLIN17-GC2010-3	SPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME Arrow
ARRLIN17-GC6890-3	SPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME Arrow
ARRLIN17-GC7890-3	SPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME Arrow
ARRLIN17-Trace1300-3	SPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME Arrow
ARRLIN20-TraceUltra-3	SPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME Arrow

All PAL SPME Arrow Liners are available as single Liner and as pack of 3 Liners.

μSPE Options

µSPE Smart Option

Part No.	Description	Compatible with		
		RTC	RSI	LSI
PAL3-Kit-uSPE54	uSPE hardware kit for PAL RTC, consisting of: 1 pc uSPE Liquid Tool D8/57 with Needle Guide for uSPE cartridges 2 pc Liquid smart syringe 1000µL (SF1000-57-T-22-FL), gauge 22, flat tip 1 pc Trayholder 2 pc VT54 rack (PAL3-Rack-VT54) 1 pc uSPE Cartridge Tray, 54 position, aluminum 1 pc uSPE Elution Tray Cover, 54 position aluminum 1 pc Waste Receptacle with drain 4 pc sample cartridges for initial installation, teaching USB stick with installation guide (requires PAL RTC System, 2 mL vials with split septa, uSPE cartridges, Firmware 2.5 or higher)	X		

µSPE Options

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
Cart-uSPE-LC-QUECHERS	Consumables for LC QuEChERS for 216 Samples (four loads of VT54), incl LC Cartridges 30mg, 1.5 mL Clear Glass Vials 12x32mm and Magnetic Screw Caps	X		
Cart-uSPE-GC-QUECHERS	Consumables for GC QuEChERS for 216 Samples (four loads of VT54), incl GC Cartridges 45mg, 1.5 mL Clear Glass Vials 12x32mm and Magnetic Screw Caps	X		
Cart-uSPE-LC-QUE-0.3mL	Consumables for LC Quechers for 216 Samples (four loads of VT54), incl Cartridges, 0.3mL PP Vials with conical insert, and Caps	X		
Cart-uSPE-GC-QUE-0.3mL	Consumables for GC Quechers for 216 Samples (four loads of VT54), incl Cartridges, 0.3mL PP Vials with conical insert, and Caps	X		

Recommended Option for µSPE

Part No.	Description	
PAL3-WashFast	Fast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of: 1 pc Wash Module with two wash positions and one Waste position 1 pc Pump Module with two solvent pumps 2 pc 1 liter solvent bottles with tubings and frits 1 pc PALbus connection cable requires firmware version 2.0.1 or higher	

Accessories

LC Valves:

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-C2V-2006D-CTC-K	6-port Cheminert Injection Valve 0.40mm bore size incl. Needle Guide, Needle Seal G22, PAL3-Kit LCVlv	X	X	X
PAL3-C2V-3606D-CTC-K	6-port Cheminert Injection Valve, 0.75mm bore size incl. Needle Seal (Gauge 22) and PAL3-KitLCVlv Prep Application, Flow Rate 5 to 100mL/min	X	X	X
PAL3-C5F-1004D-CTC	Selector Valve 8-port 0.25mm, 1000psi	X	X	X
PAL3-C72VU-6676D-CTC-K	Cheminert-Valve 6-Port 0.15mm 18'500 psi inkl.Needle Guide, Needle Seal	X	X	X
PAL3-C72VX-1670D-CTC-K	Cheminert-Valve 10-Port 0.25mm 15'000 psi	X	X	X
PAL3-C72VX-1676D-CTC-K	Cheminert-Valve 6-Port 0.25mm 15'000 psi inkl. Needle Guide, Needle Seal	X	X	X
PAL3-C82VX-1676D-CTC-K	6-port Cheminert Injection Valve 15»000 psi 75°C 0.25 mm bore size	X	X	X
PAL3-ColSel6	Column Selector Valve for up to 6 columns, consists of 2 pc 6-port Cheminert valves, bore size 0.25mm	X	X	X
PAL3-ColumnHolder	Column Holder for Valve Drive with clamps for columns OD 4.6mm	X	X	X
PAL3-DCI4WK.5/1-CTC-K	Valco W-Type LC-Valve 4-Port Internal sample loop 0.5/1.0 µL 5000 psi 50°C, 0.40 mm bore size incl. Needle Guide, Needle Seal and Kit LCVlv	X	X	X
PAL3-LCInj-G22	Standard Needle Guide for Rheodyne/ Vici valves, Gauge 22	X	X	X
PAL3-LCInj-V-G19	Standard Needle Guide for Vici valves, Gauge 19	X	X	X
PAL3-LCInj20mL-G19	Needle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet	X	X	X
PAL3-LCInj20mL-G22	Needle Guide for Rheodyne/ Vici valves, Gauge 22 Designed for tools with 20mL magnet or foil cutter	X	X	X
PAL3-PD718-110-K	6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated), Pressure up to 1200 bar, incl. Needle Guide, Needle Seal Without Sample Loop	X	X	X
PAL3-PD718-202	10-port Rheodyne Injection Valve 0.15mm bore size SPC3 coated stator and RPC-13 coated rotor seal Pressure up to 1200 bar	X	X	X

Mounting Kits:

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-Kit-5890	Mounting Kit for Agilent GC model 5890	X	X	X
PAL3-Kit-5975T	Mounting Kit for Agilent GC model 5975T	X	X	X
PAL3-Kit-6850	Mounting Kit for Agilent GC model 6850	X	X	X
PAL3-Kit-7820-D	Mounting Kit for Agilent GC model 7820 (deck mounting)	X	X	X
PAL3-Kit-7890-D	Mounting Kit for Agilent GC models 6890 / 7890 (deck mounting)	X	X	X
PAL3-Kit-7890-S	Mounting Kit for Agilent GC models 6890 / 7890 (side mounting)	X	X	X
PAL3-Kit-88xx-D	Mounting Kit for Agilent GC 6890/7980/8860/8890 with longer legs (deck mounting)	X	X	X
PAL3-Kit-88xx-S	Mounting Kit for Agilent GC 6890/7980/8860/8890 with longer legs (side mounting)	X	X	X
PAL3-Kit-Bruker-436	Mounting Kit for Bruker GC model 436 (compatible with Varian GC V3900)	X	X	X
PAL3-Kit-Bruker-451	Mounting Kit for Bruker GC model 451	X	X	X
PAL3-Kit-Bruker-456	Mounting Kit for Bruker GC model 456	X	X	X
PAL3-Kit-Focus	Mounting kit for Thermo Focus GC	X	X	X
PAL3-Kit-Intuvo-L	Mounting Kit for Agilent Intuvo 9000 GC with additional long leg	X	X	X
PAL3-Kit-MasterGC	Mounting Kit for DANI Master GC	X	X	X

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-Kit-PEC500	Mounting Kit for PERKIN ELMER Clarus 500	X	X	X
PAL3-Kit-PEC600	Mounting Kit for PERKIN ELMER Clarus 600 / Clarus 680-iQT	X	X	X
PAL3-Kit-S17A	Mounting Kit for Shimadzu GC-S17A model	X	X	X
PAL3-Kit-S2010	Mounting Kit for Shimadzu GC-2010 model	X	X	X
PAL3-Kit-S2014	Mounting Kit for Shimadzu GC-2014 model	X	X	X
PAL3-Kit-S2025	Mounting Kit for Shimadzu GC-2025 model	X	X	X
PAL3-Kit-S2030	Mounting Kit for Shimadzu GC-2030 model	X	X	X
PAL3-Kit-Standalone	Standard Support PAL3, 215mm, incl. PAL Interface Cable, 2pcs	X	X	X
PAL3-Kit-Trace	Mounting Kit for Thermo Trace GC Ultra	X	X	X
PAL3-Kit-Trace1300	Mounting Kit for Thermo Trace 1300/1310 GC	X	X	X
PAL3-Kit-Varian-3800	Mounting Kit for Varian GC model 3800	X	X	X
PAL3-Kit-YL6500	Mounting Kit for YoungLin 6500 GC	X	X	X

Other Accessories

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-Agi-InsSet-10ml	Set of 6x inserts for the Agitator to place 10mL vials instead of 20mL vials	X	X	X
PAL3-Agi-InsSet-2ml	Set of 6x inserts for the Agitator to place 2mL vials instead of 20mL vials	X	X	X
PAL3-DilAspKit	Aspiration Tubing Kit, consisting of: 1 pc Tube PFA 1 pc 28mm VitraPOR Glass Frit 40um pore size 1 pc Plug with Feed-through Holes	X	X	
PAL3-FoilCutter	Foil cutter to pierce either aluminum or plastic foils prior to the needle penetration into Microtiter or Deep Well plates (Requires PAL3-LCInj-V-G19 or PAL3-LCInj-G22)	X	X	

Consumables - Vials, Vial Caps and Seals

Vials

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
Vial-0.3-ND9-PP-100	PAL System Micro-Vial 2CV, 0.3mL Clear PP, designed for the PAL Autosampler. 12x32mm, with conical insert, fits ND9 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-1.5-ND9-AG-100	PAL System Vial 2CV, 1.5ml Amber Glass with Label, designed for the PAL Autosampler. 12x32mm, 1st Class Hydrolytic Glass, fits ND9 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-1.5-ND9-CG-100	PAL System Vial 2CV, 1.5ml Clear Glass with Label, designed for the PAL Autosampler. 12x32mm, 1st Class Hydrolytic Glass, fits ND9 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-1.5-ND9-PP-100	PAL System Vial 2CV, 1.5mL Clear PP, designed for the PAL Autosampler. 12x32mm, with filling lines, fits ND9 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-10-DC20-CG-100	PAL System Vial 10CV, 10ml Clear Glass with Label, for PAL Wash Modules. 46x22.5mm, 1st Class Hydrolytic Glass, DIN-Crimp Neck, Pk of 100pcs	X	X	X
Vial-10-ND18-AG-100	PAL System Vial 10CV, 10ml Amber Glass with Label, designed for the PAL Autosampler. 46x22.5mm, 1st Class Hydrolytic Glass, with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-10-ND18-CG-100	PAL System Vial 10CV, 10ml Clear Glass with Label, designed for the PAL Autosampler. 46x22.5mm, 1st Class Hydrolytic Glass, with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-20-DC20-AG-100	PAL System Vial 20CV, 20ml Amber Glass for Headspace. 75.5x22.5mm, 1st Class Hydrolytic Glass, DIN-Crimp Neck, Pk of 100pcs	X	X	X
Vial-20-DC20-CG-100	PAL System Vial 20CV, 20ml Clear Glass for Headspace. 75.5x22.5mm, 1st Class Hydrolytic Glass, DIN-Crimp Neck, Pk of 100pcs	X	X	X
Vial-20-ND18-AG-100	PAL System Vial 20CV, 20ml Amber Glass with Label, designed for the PAL Autosampler. 75.5x22.5mm, 1st Class Hydrolytic Glass with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-20-ND18-CG-100	PAL System Vial 20CV, 20ml Clear Glass with Label, designed for the PAL Autosampler. 75.5x22.5mm, 1st Class Hydrolytic Glass with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs	X	X	X
Vial-40-ND24-CG-100	PAL System Vial 40CV, 40ml Clear Glass with Label, designed for the PAL Autosampler. 95x27.5mm, 1st Class Hydrolytic Glass with flat top for optimized sealing. For ND24 Screw Caps, Pk of 100 Pcs	X	X	X

Vial Sample Set for trial

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-Vial-Sample-Set	Vial and Cap Sample Set consisting of: 2pc 1.5ml transparent clear glass vial, fits ND9 Screw Cap 2pc 1.5ml amber glass vial, fits ND9 Screw Cap 2pc 10ml transparent clear glass vial, fits ND18 Screw Cap 2pc 10ml amber glass vial, fits ND18 Screw Cap 2pc 20ml transparent clear glass vial, fits ND18 Screw Cap 2pc 20ml amber glass vial, fits ND18 Screw Cap 4pc Screw Cap, ND9, Magnetic, Slitted Septum 1.0mm 4pc Screw Cap, ND18, Magnetic 4pc Screw Re-Cap, ND18, Magnetic	X	X	X

Vial Caps

Part No.	Description	RTC	RSI	LSI
Cap-ND9-PP-SP10-100	PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Silicone/PTFE Septa 1.0mm, Pk of 100 pcs	X	X	X
Cap-ND9-PP-SP10S-100	PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Silicone/PTFE/I-Slitted Septa 1.0mm, Pk of 100 pcs	X	X	X
Cap-ND9-St-SP10-100	PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Magnetic, Gold, Silicone/PTFE Septa 1.0mm, Pk of 100 pcs	X	X	X
Cap-ND9-St-SP10Sb-100	PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Magnetic, Gold, Silicone/PTFE/Starburst-Slitted Septa 1.0mm, Pk of 100 pcs	X	X	X
Cap-ND18-StC-SP20-100	PAL System Screw Re-Cap 10CV and 20CV, designed for the PAL Autosampler. ND18 Magnetic, PTFE Metal Coating for optimized screw and sealing performance, Silicone/PTFE Septa 2.0mm, Pk of 100 pcs	X	X	X
Cap-ND18-St-SP15-100	PAL System Screw Cap 10CV and 20CV, designed for the PAL Autosampler. ND18 Magnetic, Silver, Silicone white/PTFE blue Septa 1.5mm, Pk of 100 pcs	X	X	X
Cap-ND24-PP-SP32-100	PAL System Screw Cap 40CV, designed for the PAL Autosampler. ND24, Silicone/PTFE Septa 3.2mm, Pk of 100 pcs	X	X	X
Cap-DC20-PE8-SP13Y-100	"PAL System Clip Cap for PAL Wash Modules. 22mm PE with 8mm center hole, Silicone/PTFE/Y-Slitted Septa 1.3mm, Pk of 100 pcs"	X	X	X
Cap-DC20-St-SP15-100	PAL System Crimp Cap for Headspace, SPME Fiber and SPME Arrow. 20mm with 8mm Center hole, Silikon / PTFE Septa 3.0mm with thinned center 1.5mm. Pack of 100pcs	X	X	X
Cap-DC20-St-SP30-100	PAL System Crimp Cap for Headspace and SPME Arrow. 20mm with 8mm Center hole, Silikon / PTFE Septa 3.0mm. Pack of 100pcs	X	X	X

Vial and Cap Kit

Part No.	Description	RTC	RSI	LSI
PAL3-Kit-WashVial-Caps	Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)	X	X	X
PAL3-Kit-WashVial-10ml	10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)	X	X	X

Needle Seal

Part No.	Description	RTC	RSI	LSI
PAL3-NdlSeal	PALseal gauge 22 for Valco and Rheodyne valves (use together with Needle Guide NV-30-25) Pack of 5 pcs	X	X	X

Spare Parts A-Z

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-Adap-7890/6890	Adapter for Agilent GC 7890/6890	X	X	X
PAL3-Adap-GC2010	Adapter for Shimadzu GC2010 Plus	X	X	X
PAL3-Adap-GC2030	Adapter for Shimadzu GC2030	X	X	X
PAL3-Adap-Trace1300-GC	Adapter for Thermo Trace 1300 GC injectors, suitable for SSL or PTV injector	X	X	X
PAL3-Adap-TraceUltra	Adapter for Thermo Trace 1300 Ultra injector	X	X	X
PAL3-AdapStdWash-2ml	Adapter for Standard Wash Station to place 2mL vial instead of the 10mL wash vial	X	X	X
PAL3-AdapStdWash-Waste	Waste Adapter for Standard Wash Module	X	X	X
PAL3-Adapters-TraceGC	Kit of adapters for Thermo Trace GC Ultra injectors: consists of one adapter for SSL/packed/purge packed injector and one adapter for PTV	X	X	X
PAL3-Adapters-FocusGC	Adapter kit for Thermo Focus GC injectors: consists of one adapter for SSL/packed/purge packed injector	X	X	X
PAL3-Agi-TeachAdap	Agitator Teaching Tool, 2pcs	X	X	X
PAL3-HS1000-Oring-kit	Spare for Headspace Tool, consisting of: 4pc O-ring 7x1.5 MVQ for syringe fixation 2pc O-ring 3x1.0 MVQ for gas connection 1pc syringe removing tool 1pc syringe O-ring removing tool	X	X	
PAL3-HS2500-Oring-kit	Spare for Headspace Tool, consisting of: 4pc O-ring 9.25x1.78 MVQ for syringe fixation 2pc O-ring 3x1.0 MVQ for gas connection 1pc syringe removing tool 1pc syringe O-ring removing tool	X	X	
PAL3-HS5000-Oring-kit	Spare for Headspace Tool, consisting of: 4pc O-ring 13x1.5 MVQ for syringe fixation 2pc O-ring 3x1.0 MVQ for gas connection 1pc syringe removing tool 1pc syringe O-ring removing tool	X	X	
PAL3-KIT-LCVlv	Kit Waste-Tubing for VICI and Rheodyne Valves	X	X	X
PAL3-LCMSLoop	Kit PAL3 LCMS Holding Loop with Fittings	X	X	
PAL3-LSI-PM-Kit	Preventive Maintenance Kit for PAL LSI, consisting of: 1pc Vial Teaching Kit 1pc Test Label Barcode 1pc Lubricant 1pc Brush 3pc Spare Screw for fixation of PALhead 1pc Spare Screw for fixation of Cover 1pc Kit Wash Vials Soft Tissue for outer surface cleaning Rough Tissue for degreasing X-,Y-,Z-Axes or Guide Rollers			X
PAL3-LubKit	PAL Lubrication Kit including brush	X	X	X

Part No.	Description	Compatible with:		
		RTC	RSI	LSI
PAL3-PM-GC-KIT	Preventive Maintenance Kit for PALSystem GC configuration, consisting of: 1pc Vial Teaching Kit 2pc Driving Belt Agitator 1pc Test Label Barcode 1pc Lubricant 1pc Brush 1pc Spare Screw for fixation of PALhead cover 1pc Spare Screw for fixation of PALhead with O-Ring 1pc Kit Wash Vials Soft Tissue for outer surface cleaning Rough Tissue for degreasing X-,Y-,Z-Axes or Guide Rollers	X	X	
PAL3-PM-LC-KIT	Preventive Maintenance Kit for PALSystem LC configuration, consisting of: 1pc Vial Teaching Kit 1pc Test Label Barcode 1pc Lubricant 1pc Brush 5pc PALseal 1pc Spare Screw for fixation of PALhead cover 1pc Spare Screw for fixation of PALhead with O-Ring 1pc Kit Waste-Tubing for VICI and Rheodyne Valves Soft Tissue for outer surface cleaning Rough Tissue for degreasing X-,Y-,Z-Axes or Guide Rollers	X	X	
PAL3-POWERSUPPLY	Main Power supply for PALSystem. Input Voltage 100-240V	X	X	X
PAL3-TubeDilutor	Transfer tubing kit for Dilutor	X	X	
PAL3-TubeFastWash	Tubing Kit for Fast Wash Module	X	X	X
PAL3-WashVial-100ml	100mL solvent vial for Large Wash Module or Solvent Module completed with snap cap (PE) and septum (Silicon/PTFE, one piece)	X	X	X

PAL SYSTEM

Ingenious sample handling

For more information on the PAL System visit:

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