

clinPAL

Automated Sample Handling and Preparation System for ICP-MS



General

The clinPAL is the first fully automated sample handling and preparation solution for analyzing clinical samples with ICP-MS. It is designed to suit the typical laboratory workflow to prepare human body fluids such as plasma, serum, and whole blood for subsequent ICP-MS analysis.

Available Models

clinPAL 850	clinPAL 1200
Rack capacity 2 rack holders for a total capacity of 6 racks	Rack capacity 4 rack holders for a total capacity of 12 racks

clinPAL Modules

PAL head	Moves dilutor needle in X-, Y-, and Z-direction
Barcode Reader	Reads information from barcode labels on the sample vial Supported barcode types: UPC-A, UPC-E, EAN-13, EAN-8, Code-128, EAN128/GS1-128, Code 39, 2 of 5 Interleaved, ISBT 128; horizontal bars, minimum barcode length 18 mm
Vortex Mixer	Homogenization of the sample by orbital interval shaking, speed up to 2000 rpm
Dilutor syringe pump	For dosing, equipped with metal-free syringe and 6-port (6+) valve
Injection valve	Metal-free 6-port/2-positions switching valve for rapid sample introduction
Wash station	For cleaning the outer surface of the dilutor needle, and for disposing the priming waste Equipped with two solenoid diaphragm pumps (flow rate 60 µL/s), two wash ports for two different cleaning solutions, and one additional waste port

Software

Fully integrated into ASpect MS software of PlasmaQuant MS including pre-configured clinPAL workflows.

Accessories & Consumables

Name	Features
Clips for Vacuette / Vacutainer	Two types of metal clips for the respective blood collection tube to allow for transport by clinPAL
Racks	Two rack types available <ul style="list-style-type: none"> ▪ Rack 54 positions for 2 mL vials ▪ Rack 24 positions for blood collection tubes
Consumables set for clinPAL	Includes tubings, fittings, ferrules, and other relevant consumables to operate clinPAL
Sample probe for clinPAL	Sample probe for clinPAL with metal-free coating
Dilutor syringe	Metal-free syringe for syringe pump
Vials	Available vial types: <ul style="list-style-type: none"> ▪ 2 mL vials PP including starburst caps

Dimensions

	clinPAL 850	clinPAL 1200
Dimensions footprint (w x d x h)	915 mm x 795 mm x 770 mm	1270 mm x 795 mm x 770 mm
Weight	29.5 kg	33.5 kg

Physical data

Interface	Ethernet
Fuse (PAL control Board)	T6.3 A/250 V
Power supply	100 – 240 V
Power consumption	200 W (max.)
Operation conditions	5 to 40°C, 80% humidity, max. 3,000 m NN

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