

# Automation That Has Your Back

## clinPAL for ICP-MS



# Automation That Has Your Back

Experience the unique solution for sample handling and preparation in the field of clinical diagnostics and benefit from the efficient and reliable workflow automation.

PlasmaQuant MS  
Elite

analytikjena  
An Endress+Hauser Company





## Innovative power for ICP-MS

With clinPAL, Analytik Jena introduces the first fully automated sample handling and preparation solution for measuring clinical samples with ICP-MS. It is designed to perform the typical laboratory workflow for testing human samples such as plasma, serum, urine and whole blood.

Sit back, let clinPAL do the work, and enjoy automation that has your back.

## Benefit from automation that ensures

### Efficiency

Achieve optimal laboratory utilization.

### Productivity

Eliminate manual preparation steps and save valuable time, space and money.

### Accuracy

Obtain highly accurate results thanks to optimal and reproducible sample preparation.

### Quality

Avoid contamination thanks to a metal-free flow path and sample vessels remaining closed at all times.



## Specialized Yet Convenient

clinPAL impresses with its large range of innovative features, simplifying sample handling and preparation for high sample throughput using small sample volumes without any manual intermediate steps.

### Contamination-free

Avoid contamination thanks to unique coating technology and septum piercing



### Fast injection

Rapid sample introduction system



### Scalability

Select the rack capacity that matches your sample throughput

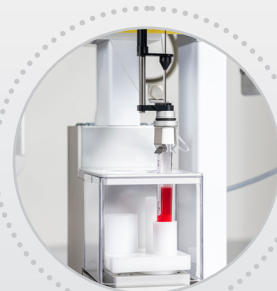




**Automatic sample recognition**  
Integrated barcode reader for  
avoiding mix-ups of samples



**One software**  
Full integration in  
ASpect MS



**Reproducible preparation**  
Integrated vortex module for  
optimal sample homogenization



**Direct vial implementation**  
Utilize conventional blood  
collection tubes

## Ideal PAL for PlasmaQuant MS

Time is money, and both are scarce commodities in today's lab work: clinPAL allows you to invest your resources economically while he takes care of preparing the samples and initiating the measurement using PlasmaQuant MS. This is what a friend in the lab is for.

### Two devices, one strong partnership

Although ICP-MS is one of the most powerful techniques in elemental analysis, these highly sensitive instruments are, in most cases, equipped with rather simple solutions for sample handling. Therefore, it is time to upgrade the PlasmaQuant MS series with an equivalent partner by its side - a real PAL - ensuring the optimal basis for ICP-MS analyses.

- **Parallelized workflow** – waiting times reduced to a minimum
- **Full integration in ASpect MS** – one software solution
- **Automatic sample recognition** – sample mix-ups are a thing of the past
- **Ease of use** – selection of pre-defined optimized workflows





# Redefining Analysis of Clinical Samples

Designed as a comfortable support for determining trace elements in clinical samples, clinPAL enables automated sample handling and preparation that is perfectly suited for the analysis with PlasmaQuant MS.

## An innovative solution for clinical labs

The automation of two complementary approaches for sample preparation is supported by clinPAL:

- A universal dilution method suitable for whole blood, plasma, serum and urine
- A method using IVDR-ready kits for serum and plasma

Automation of sample preparation, handling, and introduction minimizes personnel working hours and manual work, increasing profitability, reproducibility, and accuracy.



Table 1: Applications supported by clinPAL

	Multi-element analysis of body fluids using alkali dilution	Multi-element analysis of plasma and serum using IVDR-ready kits from RECIPE
Manual sample preparation	None	None
Applicable matrices	<ul style="list-style-type: none"> <li>▪ Plasma</li> <li>▪ Serum</li> <li>▪ Whole blood</li> <li>▪ Urine</li> </ul>	<ul style="list-style-type: none"> <li>▪ Plasma</li> <li>▪ Serum</li> </ul>
Dilution method	Alkali dilution	ClinMass® diluting solution

#### Headquarters

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Pictures: Analytik Jena GmbH+Co. KG  
Subjects to changes in design and scope of delivery as well as further technical development!

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