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Technical data

Mercury analyzer

mercur

mercur

mercur	▪ PC controlled fully automatic Hg-analyzer, based on cold vapour technique and atomic fluorescence ▪ Measuring range: low ng/L - mg/L-range
mercur plus	▪ PC controlled fully automatic Hg-Analyzer ▪ Based on cold-vapour technique and atomic fluorescence ▪ 2 gold collectors for single or double enrichment ▪ Measuring range: 0,05 ng/L to mg/L- range:
Measuring principle	▪ Cold vapour atomic fluorescence-spectrometry with excellent sensitivity, selectivity and linearity for Hg-analysis ▪ Hg vapour generation based on cold vapour technique (CV) with $SnCl_2$ as reducing agent ▪ Detection of the mercury fluorescence radiation at 253,7 nm at 90° angle to the direction of radiation source
Optical System	
Spectrometer	Atomic fluorescence spectrometer with focussing of the fluorescence radiation to the detector
Light source	Hg-low pressure lamp with high intensity
Fluorescence cell	Double sided metallized quartz flow cell, Dimensions 10 mm x 10 mm x 32
Detector	Photomultiplier
System	
Operation Mode	Time-controlled flow injection, without or with autosampler, amalgamation unit as option
Gas-Liquid Separator	Optimized gas-liquid separator, minimized foam formation and rinsing time
Gas-dryer	Perma-Pur membrane dryer with optimized efficiency through counter flow principle
Gas- and Liquid transport	▪ 4-channel peristaltic pump with separated transport of reducing agent, acid and sample waste ▪ Separate low noise 1- channel peristaltic pump for sample only, saves sample volume and reagents
Reagents	▪ Reducing agent: 2% - 10% $SnCl_2$ ▪ Acid: HCl 2,0% (Hg free) ▪ Reagent consumption: 2 mL Reducing agent and acid per measurement
Gas	▪ Argon (inert), Consumption max. 1L/Minute ▪ Input pressure 500kPa (5bar)

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Analytical Parameter	
Detection Limit	≤ 1ng/L (without enrichment) ≤ 0,1ng/L (with enrichment)
Dynamic measuring range	5 concentration decades (1ng/L – 100µg/L) without electronic sensitivity control Carry over <0,5% relative
Sample consumption	Approximately 1mL/measurement
Analysis time	Approximately 40 sec without amalgamation, approximately 100sec with amalgamation
Sample types	Liquid samples
Accessories	
Autosampler	AS-F / AS-FD – Autosampler with glass vials for fully automatic and contamination-free analysis
Other technical data	
Software	WinAAS®
Dimensions (W x H x D)	600 mm x 350 mm x 490 mm (without PC)
Weight	37 kg (without PC)
Ambient conditions	▪ Corrosion-resistant to the analyzed samples ▪ Humidity max. 90%, non-condensing ▪ Temperature +10°C up to 35°C
Power Supply	230V (±10%); 50/60Hz, Fuse 3,15A, max. 600 VA power consumption
Technical standards	▪ EN 61010-1-1; EN 61010-2-061; IEC 61010-2-061; EN 50082; EN 55011; EN 61326 ▪ ISO 9001; Certification EMC, CE Mark

Subject to changes in design and scope of delivery as well as further technical development!

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