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Flame Photometer FP8800

The FP8800 Flame Photometer is used for simple, precise and inexpensive measurement of concentration of alkaline elements in aqueous solutions for analytical applications in process and laboratory. It was developed especially for industrial applications. It features a PROFIBUS DP and two Ethernet interfaces for computer-aided process control (SPC). Two USB-ports are intended for data export (e.g. in .csv format) or firmware update via USB flash drive.
The FP8800 features the use of propane or butane as a fuel gas which allows flame-photometric measuring up to three elements simultaneously. In addition purified and dried air is required.
Measurements can be performed either with or without internal standards. Standard solutions are used for calibration, while control solutions are used to verify results. All samples, controls and standards are presented manually.
The device can be customized flexibly to users´ requests.

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Features at a glance

- Excellent quality of measurement
- Precision CV < 0.5% for Na, K, Li at 1 mg/l
- Max. 4 measuring channels + flame detection and -monitoring
- High durability
- Storage space for up to 99 methodes
- Storage space for up to 999 measuring results
- Large 8.4“ TFT-LCD with 800x600 pixel
- Intuitive operation by touch screen or mouse
- Integrated online help
- Data management in a SQL database
- Complete user management
- Complete traceability of all results
- Permanent availability of all device data
- Interfaces: 1X PROFIBUS DP, 2X Ethernet, 2X USB, 2X RS-232
- Measurement functions are accessible by process interface
- In laboratory environment connection to a LIMS is possible by internal web service (SOAP)
- Easy export of measuring data on USB flash drive (Excel .csv format)

Technical data and specifications

Measurement principle	Emission flame photometer for determination of alkaline elements (Na, K, Li) in aqueous solutions
Measuring ranges	Sodium 0.01 mg/l to 1000 mg/l Potassium 0.02 mg/l to 1000 mg/l Lithium 0.02 mg/l to 1000 mg/l
Measurement readout	max. 4 digits
Precision	CV < 0.5% for Na, K, Li at 10 mg/l
Stability	Drift < 1% / 15 min after warming-up period
Detection limits	Sodium < 1 µg/l Potassium < 2 µg/l Lithium < 1 µg/l
Spectral selection	Precision interference filters Sodium 589 nm Potassium768 nm Lithium 671 nm
Sample throughput	approx. 300 samples per hour
Sample volume	< 1 ml
Calibration	With linear characteristic: two point calibration With nonlinear characteristic: adjustment with up to 6 additional standards
Reference Line	Measurements with and without internal standard
Methods	99 freely definable methods
Result storage	999 last measurements
Fuel gas	Propane, Butane or mixture of both ~0.3 Nl/min, 1.2-1.5 bar
Compressed Air	Free of oil, water and particles ~12 Nl/min, 0.9-1.5 bar
Warming-up period	approx. 15 min
Display	8.4” TFT-LCD, 800 x 600 pixels
Operation	Resistive touch screen and USB mouse
Languages	English, German
Interfaces	1X PROFIBUS DP (process interface) 2X Ethernet (Intranet, LIMS) 2X RS-232 (multifunctional) 2X USB (manual data export and firmware update)
Power supply	230 V, 50 Hz, 75 W
Dimensions	Width 47 cm, height 49 cm, depth 44 cm