

Cole-Parmer® Flame Photometers

Determine levels of sodium, calcium, potassium, and lithium accurately

- Four-element model features additional calcium channel and lithium internal standard
- Autosampler works with the dual-channel and four-element models—ideal for your long sample runs

Four-element photometer 02655-15



Single-Channel Flame Photometer is designed with user ease and comfort in mind. The sample introduction port is located in the front. Filter replacement is made easy—there's no need to dismantle large sections of the unit. Special features ensure workplace safety, including an automatic gas shutoff if the flame becomes accidentally extinguished, as well as a thermally insulated chimney. Unit offers a wide measuring range of 0 to 1999.

Dual-Channel Three-Element Flame Photometer offers improved analytical performance over single-channel flame photometers in the measurement of sodium, potassium, and lithium ions. Features include automatic ignition sequence, lithium internal standard, monitoring and control software, and dual-channel display. Built-in linearizing software allows sodium measurements up to 40 ppm.

Obtain Na⁺ and K⁺ results simultaneously. The lithium internal standard signal reduces fluctuation in flame conditions, drift, and dilution errors—ensures reproducible results and precise measurements. The fully automatic ignition and flame optimization sequences reduce set up and calibration time. An automatic gas shutoff mechanism activates if the flame is accidentally extinguished or if air pressure drops. Monitoring and control software allow measurements only after blanking and calibration.



REQUIRED System Components

- 1) Pump [page 307](#)
- 2) Regulator [page 307](#)
- 3) Calibration standards [page 307](#)
- 4) Cleaning solutions [page 307](#)

Dual-Channel Four-Element Flame Photometer offers the same great features found on our dual-channel flame photometer, plus a calcium channel and direct measurement of Ca⁺ with potassium, which are two vital elements for soil analysis. Unit allows you to measure Ca⁺ in combination with sodium, and also with lithium without an internal standard. Use this flame photometer as a detector in combination with multichannel analyzers from SEAL Analytical, Skalar, and Lachat. This system includes its own protocols for calibration, and features a special mode allowing you to set up the flame photometer within these protocols. User-selectable signal averaging is designed into the system allowing you to use these protocols along with analog output.

Specifications

Specificity: less than 0.5% interference when concentrations are equal to test sample concentrations
Linearity: less than ±1% at midpoint with 3 ppm K⁺ set at 100

Aspiration rate: 3 to 6 mL/min
Fuel supply: high-grade propane, butane, or propane/butane mixture regulated at approx 30 psi (natural gas—only with single-channel photometer)

Description	Single-channel	Dual-channel three-element	Dual-channel four-element
Catalog number	GH-02655-00	GH-02655-10	GH-02655-15
Elements analyzed	Na ⁺ , Ca ⁺ , K ⁺ , Ba ⁺ , Li ⁺	Na ⁺ , K ⁺ (with Li ⁺ internal standard), Li ⁺	Na ⁺ , Ca ⁺ , K ⁺ (with Li ⁺ internal standard), Li ⁺
Measuring ranges	0 to 1999	ppm: all 1.00 to 9.99, 10.0 to 199.9 mmol/L: as above except Li ⁺ only 1.00 to 5.00	ppm: all 1.00 to 9.99, 10.0 to 199.9 mmol/L: as above except Li ⁺ only 1.00 to 5.00
Readout	No units	No units or mmol/L	No units or mmol/L
Sensitivity (100 displayed)	Na ⁺ and K ⁺ = 0.5 ppm; Ca ⁺ = 5 ppm Ba ⁺ = 1000 ppm; Li ⁺ = 2 ppm	Na ⁺ and K ⁺ = 0.5 ppm; Li ⁺ = 2 ppm	Na ⁺ and K ⁺ = 0.5 ppm; Ca ⁺ = 5 ppm; Li ⁺ = 2 ppm
Reproducibility	Less than ±2%	Less than ±0.5%	Less than ±0.5%
Reading stabilization	20 seconds	Variable software command	Variable software command
Recorder output	0 to 200 mV fsd	Two outputs: 50 mV to 7.5 V via software command	Two outputs: 50 mV to 7.5 V via software command
Air supply (required)	6 liters/min at 12 psi, oil and moisture free	6 liters/min at 12 psi, oil and moisture free	6 liters/min at 15 psi, oil and moisture free
Price			