

# 410 FLAME PHOTOMETER



# 410 Flame Photometer

## Ciba Corning Analytical

For 30 years Ciba Corning has been at the forefront of flame photometer technology. During these years, this inherently simple and reliable methodology has been applied in a range of products encompassing many fields of application. eg. Water analysis, Foodstuffs, Agricultural and Quality Control.

The Ciba Corning 410 System is founded on this experience and also benefits from the utilisation of state-of-the-art technology in electronics and construction materials.

It's bright digital display, simple ergonomically designed controls and fail-safe flame system make the 410 a pleasure to use and directly contribute to the accuracy and reliability of the data obtained.

The Ciba Corning 410 brings the following major features and benefits to low cost flame photometry.

### Economical

- Low purchase price and running cost
- Instrument regulator supplied at no extra cost

### Applications Flexibility

- Full range of filters available. (Na, K and Li provided as standard).

### Automatic Sample Dilution

- For general purpose applications by the addition of the Ciba Corning 805 Dilutor.

### Simple/Reliable Operation

- Digital display
- Ergonomically designed control system.
- Auto ignition with built in 'fail-safe' flame monitoring system.

### Ciba Corning Support

- Applications assistance through published methods and from Ciba Corning specialists.
- Readily available parts, supplies and after sales service from local Ciba Corning and/or distributor organisations

## General Description

### Controls and Indicators

- POWER ON/OFF
- 'POWER' & 'FLAME ON' (L.E.D. Indicators).
- DISPLAY (L.E.D., 12.5 mm, 3 1/2 digit).
- FUEL (rotary control).
- BLANK (rotary control).
- SENSITIVITY FINE (rotary control).
- SENSITIVITY COARSE (rotary control).

### Recorder Output

- 100 mV.

### Air Supply

- Oil and moisture free.
- 6 litres/min at 14 p.s.i. minimum. (Ciba Corning Models 850 and 856 Compressors are recommended).

### Electrical Supply

- 90 to 127 volts or 198 to 264 volts AC.
- 50/90 Hz.

### Fuel Supply

- High grade propane, butane or propane/butane mixture. Fuel should be free from heavy hydrocarbon deposits and regulated to approximately 30 p.s.i. at the cylinder.
- Natural Gas.

### Size and Weight

- 510 mm (high) 390 mm (wide) 345 mm (deep) - 9.5 kg.
- Packed 730 mm (high) 450 mm (deep) - 16.5 kg.

## 410 Performance Specification

### Sensitivity

The following concentrations will produce a display reading of a minimum 100 scale digits

- Sodium 3 ppm
- Potassium 3 ppm
- Lithium 5 ppm
- Calcium 50 ppm
- Barium 200 ppm

### Specificity

- Less than 0.5% concentration of interferent of Na, K, Li, and Ba equal to the concentration of element under test for Na, K, and Li only.

### Linearity

Better than 2% when measured at mid scale and calibrated against:

- Sodium 3 ppm
- Potassium 3 ppm
- Lithium 5 ppm

### Reproducibility

Better than 1% C.V. for twenty consecutive samples at the following concentrations:

- Sodium 10 ppm
- Potassium 10 ppm
- Lithium 10 ppm
- Calcium 100 ppm
- Barium 1000 ppm

### Sample Size

- Aspiration rate: 2 - 6 ml/min.
- Time to steady state reading (from presentation of sample): typically 8 seconds.

## Ordering Information

M410 Flame Photometer complete with: Na, K, Li Filters	475 41 200E
M805 Dilutor	475 41 100N
M850 Compressor	850 01 000A

A primary regulator is required on the gas supply. See price list for full details

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