

# Spectrometer / Colorimeter

## Flame Emission and Atomic Absorption



**CH3792-001**

### Description:

The IEC 'Flame and AA Spectrometer' is used for the teaching of analytical chemistry. It introduces instrumentation to the student which is similar in function to that used in the workplace. The 'IEC Spectrometer' can demonstrate the principles of both flame and atomic absorption spectrometry. It is used also as an accurate colorimeter.

Results can be handled in two ways:

- Manually: by taking readings on the special meter provided in the kit and then calculating the results and plotting the various graphs manually or
- Automatically: by recording all data, readings and results on a computer disk and manipulating data graphically. The students' work can be saved for later reference.

This instrument is not limited to spectrometry. By removing the spectrometer's light sensor from the control panel and by inserting the external signal cable, the unit can be used as a convenient very high gain signal amplifier for other experiments. Signals can be applied from say a gas chromatograph and the results handled by either the meter or the software.

Most laboratories have a sodium vapour light source however, if required, IEC can provide a suitable low-cost sodium vapour light source for atomic absorption work..

Length: 320mm

Width: 176mm

Height: 220mm

Weight: 4.2kg

**INDUSTRIAL EQUIPMENT & CONTROL PTY.LTD.**

61-65 McClure St. Thornbury. 3071 Melbourne. Australia

Tel: 61 (0)3 9497 2555

Email: [iec@iecipl.com.au](mailto:iec@iecipl.com.au)

[www.iecipl.com.au](http://www.iecipl.com.au)

1

## Kit Contains:

- 1 pce Spectrometer unit and light detector on cable.
- 1 pce Flame spreader for top of burner
- 1 pce Plug-pak power source, 12V.AC. or DC. (Australian sales only)
- 1 pce USB Cable for connecting to the USB port of a computer.
- 1 pce Cable with DIN plug for external uV/mV signals.
- 1 pce Bench meter (0-100% & 0-5V.DC. scales) for measurements.
- 1 pair Connecting leads for meter, red / black.
- 2 pcs Atomiser (nebuliser) to feed a mist of sample fluid into the flame.
- 10 pcs Cuvettes for colorimetric samples.
- 1 pce Handbook of instructions.
- 1 pce CD with instructions and program to run in Windows 2000, XP or Vista  
(Note: an adapter is available for Windows 10, PA3792-090)

IEC provides an extra document for more information on using the Flame Spectrometer. This document is designed to provide basic explanations of the principles and should be read and fully understood before performing experiments using the main handbook supplied with the equipment.

## A suitable light source for Spectrometry:

### CH3792-125

(not supplied with the Spectrometer):



Designed and manufactured in Australia