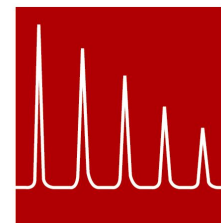


Series 100 FPD Gas Chromatograph

AGC INSTRUMENTS

Gas Chromatography since 1965



Your Solution for Sulphur!!!!

The Series 100 FPD GC from offers the solution to many Sulphur & Phosphorous bearing compounds

Sulphur Compounds such as Hydrogen Sulphide (H_2S), Carbon Disulphide (CS_2), Sulphur Dioxide (SO_2), Carbonyl Sulphide (COS) & Mercaptans are examples of typical Customer requirements that can now be easily analysed in a matter of minutes.



Flame Photometric Detector (FPD)

Detector Specification

Operates with double or single flame

Filters: Sulphur (380nm)
Phosphorous (526nm)

Operating Temperature: Ambient to 300°C

Sulphur Mode:

Sensitivity: 20pg S/sec for thiophene
Linear Range: 10^3
Selectivity: 10^5 gS/gC

Phosphorous Mode:

Sensitivity: 0.9pg P/sec for DDVP
Linear Range: 10^4
Selectivity: 10^6 gP/gC

Features:

Single or Double Flame

Cost Effective

19" Rack configuration

Versatile Design

Automatic Operation and Control via TrendVision Software

Minimum Operator Interference

Sensitivity < 50ppb of H_2S

Available for use in Safe Area and in Zone 1 or Zone 2

All materials in contact with sample will be manufactured in corrosion resistant material

Target Market:

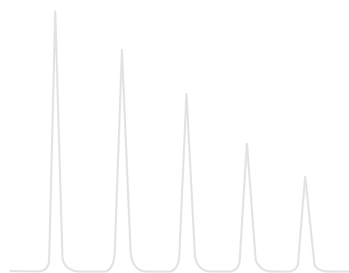
Specialty Gas Manufacturers

Natural Gas Analysis

Petrochemical applications

Refinery applications

Vehicle Emissions Testing



Principal of Operation

When an excitation energy is applied to the atoms of an element, a photometric emission spectrum is obtained whose wavelength is characteristic of the element. The intensity of the emitted light is proportional to the number of atoms excited.

Within the flame photometric detector, the excitation energy is derived from the combustion of the sample in a hydrogen-rich flame. Variations in intensity of the emitted light are detected by a photomultiplier, which converts the photons to an electrical signal, which is measured on an electrometer.

The FPD from AGC Instruments is designed to give a response to sulphur and phosphorous compounds, has a selectivity achieved by the inclusion of filters which will only allow wavelengths characteristic of these elements to pass (380nm for sulphur and 526 nm for phosphorus).

If only one reducing flame is used phosphorus emission is a linear function of the quantity, while the emission from sulphur is a logarithmic function of the quantity, this latter depending also on the hydrocarbon part of the molecule so that an accurate response calibration for each component injected is required.

Furthermore, with the simultaneous combustion of sulphur and hydrocarbon compounds in the reducing flame an undesirable "quenching" effect occurs, bringing about the reduction, or even the total extinction of sulphur emission. In order to overcome these problems, the AGC Instruments FPD uses an oxidising flame where the components eluting from the column are first burnt.

Instrument Specification

Connections:	1/8" Swagelok® fittings (Corrosive Resistant depending on application)		
Sample Inlet:	Gas Sample Valve		
Columns used:	Chromasil Packed Columns (3m x 1/8")		
Output Signal:	0 to 100mV		
Configurations available:	Laboratory system or Rack mounted system		
Model Part Number:	S100-FPD-P	(for Phosphorous Mode)	
	S100-FPD-S	(for Sulphur Mode)	
Power Requirements:	110/220/240V, 50/60Hz		
Dimensions:	Bench Mount:	430mm(W)	225mm(H) 400mm(D)
	Rack mount:	19" (W)	5U (H) 450mm(D)
Shipping Weights:	Laboratory:	30kgs	
	Rack Mount:	30kgs	

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