

ARGON ANALYZER

GO BEYOND THE LIMITS. . .

The technology

Such results are obtained either by using a high frequency discharge detector (Argodyne, Argon 1 and Argon 2) or by using a flame ionization detector (Argon 3). Argon 4 system uses both detectors.



High Frequency Discharge Detector:

The "AR15" detector uses the variation of the luminosity of a high frequency discharge in Argon. The carrier gas (Argon) is passed through a detection chamber, where it is exposed to a high frequency electromagnetic field generated between two electrodes by a high-frequency generator. In these conditions luminescence takes place. The characteristics of the luminescence are modified by any impurity in the initial gas passing through the chamber.

The luminous intensity of the discharge particularly gives, under well defined detector working conditions, a stable, continuous and linear function of gas composition for each impurity. The luminous intensity of the discharge is measured by means of a photoreceptive cell which is part of a bridge, the unbalanced voltage of which becomes, after amplification, the output signal of the instrument.

Flame ionization detector:

The "FID" detector is mainly composed of a flame ionization detector placed in a temperature regulated chamber. It is designed to detect traces of hydrocarbons. Coupled with a methanizer, it also detects traces of CO and CO₂.

The combustion of Hydrogen and synthetic air creates a flame in which the organic components contained in the gas to be analyzed are burnt off. When burning, these components produce ions which are collected by an electrode. The very weak current obtained in this way is amplified in an electrometer with high gain and directed to a recording system. A polarization electrode is connected on the level of the nozzle and the adjustable collecting electrode makes it possible to achieve the best results.



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THE ANALYTICAL SYSTEMS

To control the quality of Argon, Orthodyne uses different techniques, and by using a modular system concept, Orthodyne can offer you the best adapted analyzer to your analytical problem.

Orthodyne analyzers for measuring impurities in Argon include the following :



SYSTEM ARGODYNE

Analysis of O₂ and N₂ in Argon

O ₂	<	0.1 ppm
N ₂	<	0.1 ppm

SYSTEM ARGON 1

Analysis of H₂, O₂, N₂, CH₄ and CO in Argon

H ₂	<	0.05 ppm
O ₂	<	0.1 ppm
N ₂	<	0.1 ppm
CH ₄	<	0.05 ppm
CO	<	2 ppm

SYSTEM ARGON 2

Analysis of H₂, O₂, N₂, CH₄, CO and CO₂ in Argon

H ₂	<	0.05 ppm
O ₂	<	0.2 ppm
N ₂	<	0.2 ppm
CH ₄	<	0.1 ppm
CO	<	4 ppm
CO ₂	<	0.8 ppm

SYSTEM ARGON 3

Analysis of CH₄, CO, CO₂ and THC in Argon

THC = C₂, C₃, C₄ and C₅.

CH ₄	<	0.01 ppm
CO	<	0.01 ppm
CO ₂	<	0.01 ppm
THC	<	0.01 ppm

SYSTEM ARGON 4

Analysis of H₂, O₂, N₂, CH₄, CO, CO₂ and THC in Argon

THC = C₂, C₃, C₄ and C₅.

H ₂	<	0.05 ppm
O ₂	<	0.1 ppm
N ₂	<	0.1 ppm
CH ₄	<	0.01 ppm
CO	<	0.01 ppm
CO ₂	<	0.01 ppm
THC	<	0.01 ppm