DET
innovations in chemical detection
CHROMalytic +61(0)3 9762 2034
ECHnology Pty Ltd
Australian Distributors; Importers & Manufacturers

USED GC DEALERS - CONSIDER THE VALUE ADDED ADVANTAGES OF THERMIONIC SURFACE IONIZATION DETECTION TECHNOLOGY

unprecedented capability for interchange between multiple modes of selective chemical detection using low cost, uncomplicated detector equipment

1. Simple, inexpensive detector components feature an electrically heated, cylindrically shaped ceramic ion source element positioned on the axis of an ion collector cylinder for stream-lined gas flow and optimum ion collection.

2. Detector hardware structures designed for easy custom mounting onto an existing FID or NPD type detector base to provide access to 2 or 3 detector gases – variable orientations of signal probe arm to avoid adjacent structures – easy self-aligning top access installation of ion source elements.

3. Multiple modes of selective detection achieved with the same basic equipment by easy changes of the ion source element and detector gases – 9 different choices for the ionizing element are currently available.

4. Selectivity modes include compounds containing N and P atoms (NPD), O, Cl, Br, I, Pb, Sn, or Si atoms, as well as selectivity for NO_2, CH_2, or Pyrrole vs. Pyridine functional groups, among others.

5. Unlike other GC detectors, Thermionic Ionization Detectors (TID) do not require ultra high purity gases – ambient Air is acceptable for some modes.

6. Unlike glass NPD ion sources, rigid ceramic coated surfaces withstand NPD operating temperatures of 600 to 800°C without softening or melting, and have unlimited shelf life when not in use.

7. Stainless steel/ceramic detector hardware structures capable of operation at wall temperatures in excess of 400°C.

8. Unique sensitivities and selectivities often reveal trace level sample impurities not seen by other types of GC detectors.

9. Only a few loose parts for simple, inexpensive service and maintenance.

(versatile detector capability helps sell the entire GC instrument)

AN EXTENSIVE LIBRARY OF SELECTIVE DETECTION APPLICATIONS:

- sub-picogram detection of NP pesticides and drugs (NPD);
- exceptional femtogram sensitivity for Nitro explosives like 2,4-Dinitrotoluene and TNT, as well as Nitro pesticides like Methyl Parathion (TID-1 mode);
- sub-picogram detection for some Halogenated pesticides like Heptachlor, Dieldrin, Chlordane, Pentachlorophenol, Atrazine, etc (TID-1 mode);
- low picogram detection of Trihalomethane purification byproducts in drinking water (TID-3 mode);
- selective detection of Ethanol and other Alcohols in Petroleum and Biofuels (TID-1-Nitrogen mode);
- selective detection of Acetic, Formic, and other Carboxylic Acids in Wine and other food and flavor analyses (TID-1 mode);
- selective detection of linear chain Hydrocarbons and Fatty Acid Methyl Esters (FAMEs) in petroleum and biofuels with discrimination between saturated and unsaturated Carbon bonds (Catalytic Combustion Ionization);
- picogram detection of BisPhenol A (BPA) and Phthalates in food packaging products (TID-1 mode);
- detection of Glycerol and Glycols in wine and food products (TID-1-Nitrogen);
- detection of Poly Brominated Diphenyl Ether (PBDE) flame retardants used on packaging for computers and other commercial products (TID-3 mode);
- selective detection of Lead and Tin in environmental samples (Remote FID);
- low picogram detection of Phenols in environmental samples (TID-1);
- low picogram detection of Vanillin and Salicylates in food flavorings (TID-1);
- detection of trace Water in solvents and petroleum samples (TID-1-Air mode);
- simple detection of the buildup of decomposition products in motor oil versus automobile usage miles of the oil (TID-1-Nitrogen mode);
- selective detection of Acrylamide in processed food products (NPD).