



GDA 2 Gas Detector Array 2

Portable detector for hazardous gases and chemical agents

The new **Portable Gas Detector Array** is specifically designed to detect and monitor most common hazardous gases including chemical warfare agents (CWA).

The main detector, an ion-mobility spectrometer (IMS) readily detects ammonia, inorganic sour gases, small chlorinated molecules as well as other electropositive and electronegative compounds. The IMS is also used in the CWA detection mode.

The IMS functions as part of an array that includes a photoionization detector (PID), an electrochemical cell and two metal oxide sensors. With the additional detectors the GDA is able to evaluate other toxic compounds, including benzene, phosgene, vinyl chloride and chlorobenzene.

The **GDA 2's** gas flow system and internal dilution system is ideal for fire and rescue workers operating in harsh environments.

Important features:

- **Detects all the main hazardous gases**
- **Unique combination of different detectors (IMS, PID, EC, MOS)**
- **Portable instrument with integrated display, optical and visual alarms**



- **Detection in seconds**
- **Powered with rechargeable batteries**
- **Works with computer or in stand-alone mode**
- **Specifically designed for First Responders: Police, Fire Departments and EMS workers**
- **Substance identification possible using pattern recognition methods**
- **Offers a Safe/Unsafe default read out for inexperienced or infrequent operators**

AIRSENSE
ANALYTICS

dijkstra
vereenigde

Postbus 2151
8203 AD Lelystad
Tel: 0320-266171
email: laboratorium@dijkstra.net
www.dijkstra.net

Pascallaan 9
8218 NJ Lelystad
Fax: 0320-257354



Technical Data GDA 2

Hazardous compounds / (GDA-Mode) List with tolerable concentrations*

| Substance | Concentration limit* [ppm] | Sensor type | Substance | Concentration limit* [ppm] | Sensor type |
|-------------------|----------------------------|--------------|-------------------------|----------------------------|--------------|
| Acetic acid | 20 | IMS, SC | Hydrogen cyanide | 5 | IMS, EC |
| Acetone | 500 | IMS, PID, SC | Hydrogen fluoride | 5 | (IMS), EC |
| Acroleine | 0.2 | SC | Hydrogen sulfide | 10 | IMS, EC |
| Acrylonitrile | 20 | IMS, SC | Methanol | 500 | IMS, SC |
| Ammonia | 50 | IMS, SC, EC | Nitrogen dioxide | 1 | IMS |
| Benzene | 20 | PID, SC | Phosgene | 0.1 | EC |
| Carbon dioxide | 10000 | - | Phosphine | 0.5 | EC |
| Carbon disulfide | 10 | IMS | Styrene | 40 | IMS, PID, SC |
| Carbon monoxide | 100 | SC | Sulfur dioxide | 1 | IMS, EC |
| Chlorine | 1 | IMS, EC | Tetrachloroethylene | 100 | IMS, SC |
| Chlorobenzene | 100 | PID, SC | Toluene | 100 | PID, SC |
| Chlorocyanide | 0.3 | IMS | Toluene diisocyanate | 0.02 | IMS |
| Hydrazine | 1 | IMS | Trichloroethane, 1,1,1- | 300 | IMS |
| Ethanol | 3000 | IMS, PID, SC | Trichloroethane, 1,1,2- | 25 | IMS |
| Formaldehyde | 1 | SC | Trichloroethylene | 100 | IMS, PID |
| Hexane, n- | 200 | PID, SC | Vinyl chloride | 100 | PID, SC, EC |
| Hydrogen chloride | 5 | IMS, EC | | | |

* Selection of chemical compounds (comparable to ERPG), tolerable concentration values for firefighter working 4 hours without breath protection

Chemical Warfare Agents (IMS- Mode)

| Nerves | Skin | Blood |
|------------|-------------|-------|
| GA (Tabun) | HD (S-Lost) | AC |
| GB (Sarin) | HN (N-Lost) | |
| GD (Soman) | L (Lewisit) | |
| GF | | |
| VX | | |

Modes of Operation: GDA mode for hazardous compounds, IMS mode for chemical warfare agents

Detectors: ion mobility spectrometer (Ni63 ion source, positive and negative mode), photo ionization detector (10.2 eV), electrochemical cell, 2 metal oxide sensors

Sampling System: internal pumps, internal sample dilution system

Measurement Time: typical some seconds to less than 1 min

Identification: different pattern recognition methods available

Display: graphical display integrated, serial port – RS-232

Power: 30W, powered by rechargeable battery and/or power supply

Weight: 4.2 kg (8.4 lbm) (without batteries)

Dimensions: ca. 395 x 112 x 210 mm (ca. 15.7 x 4.5 x 8.4 in)

Options: Infrared heater for thermal desorption and analysis of surfaces



Postbus 2151 Pascallaan 9
 8203 AD Lelystad 8218 NJ Lelystad
 Tel: 0320-266171 Fax: 0320-257354
 email: laboratorium@dijkstra.net
www.dijkstra.net

