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## Introduction

The CWA-Analyzer is a multi-gas analyzer for the high-sensitive detection and identification of Chemical Warfare Agents (CWAs) and/or Toxic Industrial Chemicals (TICs) without any enrichment directly in situ already at a very low concentration level. They have been developed by IUT over more than 20 years.

Compared with other systems the CWA-Analyzer has the advantage to operate under atmospheric pressure. For the enhancement of the selectivity and further reduction of possible cross sensitivities the CWA-Analyzer is also available as GC-IMS, a gas chromatographic (GC) column coupled with an IMS.

The detection including sampling and identification process takes few seconds, depending on the possible GC-Setup.

## Features

- High sensitivity in lower ppb-range
- Enhancement with GC-column coupling (GC-IMS) possible
- Analysis directly in situ  
(No Tedlar bag sampling / no lab analysis)
- Operation under ambient air pressure
- Long-term-stability and reliability
- Solid-state electronics and few moving parts
- Low Maintenance Time - High Up Time

## Specifications

### IMS-Analyzer

<b>Principle of Operation</b>	IMS with gaschromatographic pre-separation (GC-IMS), no carrier gas required
<b>Resolution</b>	± 2 % of full scale

### Operating Specification

<b>Operating ambient Temperature</b>	19" Housing: 15 °C - 30 °C (+59 °F - 86 °F)	NEMA 4X Housing: -40 °C - 50 °C (-40 °F - 122 °F)	Mobile: -10 °C - 50 °C (+14 °F - 122 °F)
<b>Output</b>	Integrated graph. display, 1 RS 232, LAN/W-LAN (optional), Digital I/O, USB		
<b>Maintenance Rate</b>	1x yearly service		

### Analyzer Physical Specification

<b>Dimensions</b>	Portable Housing: 280 (W) x 100 (H) x 330 mm (D) (11 x 3.9 x 12.9 inch)	19" Housing: 483 (W) x 135 (H) x 420 mm (D) (19 x 5.3 x 16.5 inch)	NEMA 4X Housing: 500 (W) x 500 (H) x 210 mm (D) (19.7 x 19.7 x 8.3 inch)
<b>Weight</b>	Portable Housing: 7 kg (15.5 lbs)	19" Housing: 10 kg (22.0 lbs)	NEMA 4X Housing: 18 kg (40.0 lbs)

### Utility Requirements

<b>Power supply</b>	230 (115) VAC; 3 (5) A; 50 (60) Hz		
<b>Avg. power consump.</b>	Portable: 16 W (Battery)	19": 33.6 W	NEMA 4X: 40.7 W.
<b>Peak power consump.</b>	Portable: 56 W (Loading)	19": 51.6 W	NEMA 4X: 250.2 W
<b>Intake Flow</b>	250 - 300 ml/min at atmospheric pressure (self-priming)		
<b>Sample Exhaust</b>	± 3.5 kPa (0.5 psi) (max.) at atmospheric pressure		

### Example Compounds

CWA: Sarin, Tabun, Soman, VX, S-Mustard, N-Mustard, Lewisite  
TIC: HCN, Phosgene, Chlorine, Hydrogen Sulfide, Chlorocyanide, Carbon Disulfide, Dithiane