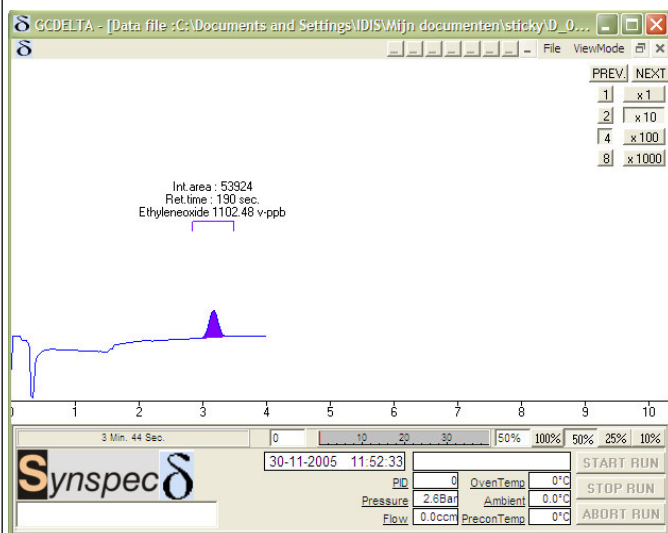


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SYNSPEC DELTA TOXIC ANALYSER



Channel name	Actual value	TRENDS	TWA-5min	TWA-5min
1 Flur	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
2 Belades. K-L	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
4 Warenaus 1	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
6 Halle 2-1	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb
Benzol	0.00 v-ppb		0.00 v-ppb	0.00 v-ppb

TOXIC HYDROCARBON ANALYSER

THE DELTA IS THE NEW LINE IN SINGLE COMPONENT ANALYSERS OF SYNSPEC FOR THE MEASUREMENT OF TOXIC HYDROCARBONS. IN THE DELTA WE HAVE COMBINED OUR KNOWLEDGE AND 10 YEARS EXPERIENCE IN DESIGN, DEVELOPMENT AND PRODUCTION OF GAS CHROMATOGRAPHS FOR AMBIENT AIR MONITORING. THE DELTA ANALYSER IS SPECIALLY MADE FOR ENVIRONMENTAL AND SAFETY MONITORING IN INDUSTRIAL AREAS.

Synspec has developed since years monitors for measurements of hydrocarbons on behalf of industrial safety. Environmental and industrial safety authorities require very strict monitoring of the carcinogenic and highly toxic hydrocarbons increasingly : This means that low ppm to ppb measurements for indoor industrial applications down to low ppb for outdoor use are obligatory. We offer for this a multipoint sampler, automatic measurements, simple software, automatic TWA calculations, flexible data-communication

Examples of applications:

Benzene, Epichlorohydrin

Ethylene oxide, Propylene oxide

Acrylonitrile, 1,3-Butadiene, Styrene

Vinyl chloride, Dichloroethane

THT(tetra hydro thiophene) in natural gas

AND MANY OTHER TOXIC HYDROCARBONS ON DEMAND

The Synspec Delta software is especially adapted to industrial safety monitoring. The combination of a channel selector with different types of external digital and analogue output boxes is fully supported with a flexible software. This software can communicate the result to external data loggers as required. Calibration and validation options are programmed, gas consumption is low, adaptations for Ex safety are possible.

MEASURING PRINCIPLE: The analyser is a compact GC. It contains all the essential elements: sampling unit, backflush valve, separation column in special small oven unit and detector. The detector is an FID or a PID, depending on the application.

The gas sample is pumped in a **LOOP**. The sample is then injected over the valve into a column and the single hydrocarbons pass on to the detector. The loop size is adapted to the concentration range specified by the customer.

All higher boiling hydrocarbons will be **BACKFLUSHED**.-This means that the system will auto clean and that a short cycle time is possible. The system is adapted to the specific hydrocarbon that must be monitored with regard to the essential parameters column, flow, temperature and backflush setting.

The instrument works with a **TRUE GAS CHROMATOGRAPHIC SEPARATION**: we use this to avoid problems with misidentification.

GAS CHROMATOGRAPH

DELTA MODEL 300	Detector: PID. Levels: 0.1 ppm to 0.01 ppm for hydrocarbons sensitive to PID, or FID detector, Levels: 0.5 ppm to 0.1 ppm for hydrocarbons sensitive to FID cycle time 1 to 10 min
CONSUMPTION OF GAS	PID / FID: nitrogen, quality 5.0, 2.0 bar, 5 ml/min FID: instrument air: dry and clean, 2.5 bar, 250 ml/min FID: hydrogen, quality 5.0, 2.5 bar at 20 ml/min
RANGE	0 - 1000 ppm for FID, 0- 100 ppm for PID
REPRODUCIBILITY	1% of FS

HARDWARE AND COMMUNICATION OPTIONS

INCLUDED HARDWARE	Computer Pentium class, harddisk >40 Gb, 6 " full colour LCD display, I/O 2 x RS232, 4 x USB, Ethernet, PS2 keyboard/mouse, touchscreen
INCLUDED SOFTWARE	WindowsXPe, GC software, TWA calculation modules, alarm setting modules
COMMUNICATION	Direct control via keyboard or mouse, or via remote host (RS232/Ethernet/ modem), or via TCP/IP data exchange protocols available on demand
GC SPECIFICATION	Loop 0.075 to 2 ml, 10 port valve Synspec, analytical column 2 -13 m backflush column 0.5 to 2 m
CALIBRATION	internal calibration switch for calibration with zero and span gas, gas stream required 25 ml at ambient pressure

PHYSICAL DATA

DIMENSIONS	19" rack, 3 standard Height Units, depth 42 cm net
POWER DEMAND	220 Vac, 200 VA (110 Vac available)
TEMPERATURE RANGE	5 to 40 °C
HUMIDITY	20 TO 95%
WEIGHT	12 KGS

GENERAL

APPROVALS	CE approval for EMC conformity: EN 61010-1, EN 61000-6-2 and EN 60111-6-3
EXTRA FUNCTION	Combination with stream selector possible: stream selector type Vici dead end or flow through, 6 to 16 stream, pump 5l/min (internal) or on demand external. Combination with RS232 alarm outputs 4-20 mA up to 15 stream.