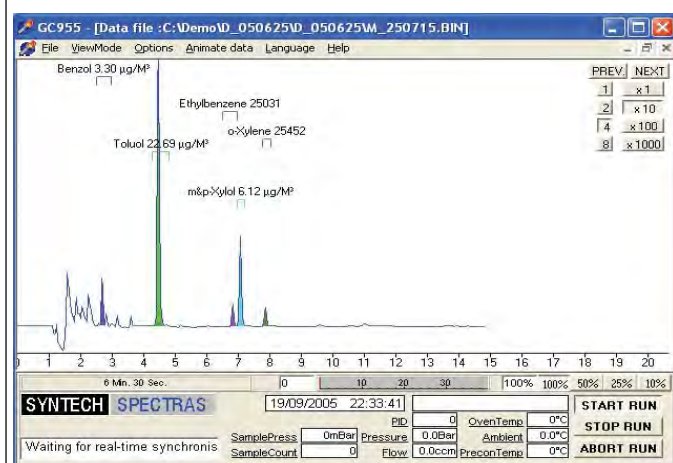
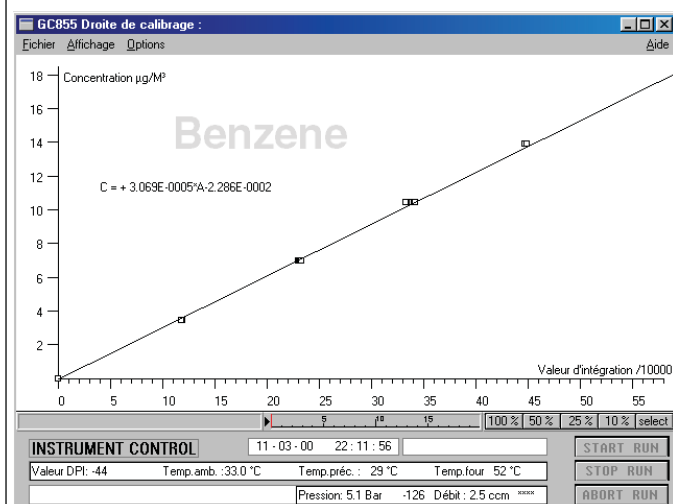


# SYNTECH SPECTRAS

## BENZENE / BTEX analyzer



### BTEX MEASUREMENT IN AMBIENT AIR



### FOUR POINT CALIBRATION TEST UP TO 12 µG/M3

### OUR MOST SUCCESSFUL PRODUCT

THE SYNTECH SPECTRAS GC955 SERIES 600 BTEX ANALYSER IS BUILT FOR THE MEASUREMENT OF BENZENE, TOLUENE AND XYLENE ISOMERS IN AMBIENT AIR. IT IS OUR MOST SUCCESSFUL PRODUCT, ABOUT 800 OF THESE ANALYZERS ARE STANDING ALL AROUND THE WORLD.

### HYDROCARBON SELECTION

Benzene is a carcinogenic compound. It may lead to leukemia. This fact means that there is not really a safe concentration for benzene. A lot of work has been done to estimate how much the ambient air pollution may increase the deaths due to cancer.

By European regulations measurement of benzene in ambient air is now obligatory. A standard has been set that aims at a yearly mean value by 2010 below 5 µg/m³. The concentration of benzene varies from under 0.1 to above 100 micrograms per m³.

Benzene in the air is coming from evaporated fuel, either in gas filling stations or from cars. It is emitted by burning fuel in cars, and also from other burning processes, like bio fuel heating or forest fires.

Toluene, Ethylbenzene and o,m,p-Xylene are as standard included in the analyzer set-up. They belong to the most active ozone precursor VOC, have many sources. In some areas the concentration can reach high values that may have harmful toxic effects.

### SYNSPEC BTEX CAN MEASURE UP TO 40 COMPOUNDS

With different settings and suitable calibration gas it is possible to measure as maximum up to 40 compounds in one 30 minute run, like octane, chloroethenes, trimethylbenzenes etc. Data processing and communication is prepared for this.

The user will have to buy the suitable calibration gas and needs training to set the system for extra parameters and calibrate for them.

As an alternative it is possible to order a system 611, for ozone precursors C6 to C12 or to order a toxic system 615. Then the user can already specify the list of compounds to be measured and Synspec will do the calibration at an additional price.

#### DETAILS BTEX ANALYZER

The instrument is a gas chromatograph with a built-in preconcentration system. Hydrocarbons are preconcentrated on Tenax GR, desorbed thermally and separated on an EPA624 equivalent column, to reach optimal separation from interfering hydrocarbons. Analysis is done by a photo ionization detector. This ensures a high specific sensitivity for benzene and other aromatic hydrocarbons.

A standard industrial PC with Windows, running under XPe is used.

The user-friendly software stores all the chromatograms on the hard disk and data can be interpreted easily with this intuitive software. Data can also be transferred by network and modem connection. Besides this, analogue and digital output options are available to communicate with other data logging systems using several data protocols.

Simple operation, good reliability and low maintenance cost are important to us. With a network of distributors in and outside of Europe you can be sure that your instrument comes complete with an individualised training and that support is available to help if you need it. The new Syntech Spectras GC955 needs on only one gas to work, nitrogen, using a very small quantity.

The mean time for maintenance is >30 days. By automatic validation and a good alarm function system the customer can be certain of good quality data. In the newest version even an automatic multipoint validation using only one calibration gas generating multiple concentrations in the system can be activated in the software.

The expected lifetime of the analyzer is 10 years. Our standard warranty is one year, with 2 years for the detector.

The Syntech Spectras analyser that includes a double column and a 10 port valve and utilizes a backflush technique has the unique benefit that at the end of the cycle the analytical column is self cleaning for several minutes. The nitrogen coming from the column also cleans the PID lamp.

Optionally it is possible to install an extra valve and a tubing suitable for a higher flow of clean nitrogen for a direct cleaning of PID lamp.

<b>601 BENZENE, toluene, ethylbenzene and xylenes in air.</b>	PID detector. Lowest detection level for benzene 0.1 µg/m <sup>3</sup> (0.03 vppb). Range: up to 300 ppb. Included items: SERIES 600, column AT624 15m, 0.32 mm ID, 1.8 µm film, cycle time 15 min, temp program 50 - 70 °C
<b>CALIBRATION</b>	Standard calibration provided for BTX 6 point in range 4 to 16 ppb, for Ethylbenzene and o-Xylene single point at 5 ppb
<b>EXTENSION OPTION</b>	The system is prepared in software and hardware to measure up to 40 hydrocarbons in the boiling point range from 60 °C up to 250 °C. Ask Synspec for advise about calibration gas and peak window setting. At an additional price Synspec can calibrate these already upon ordering.
<b>SYSTEM CLEANING</b>	10 port valve with double column for backflush to condition columns during each cycle and clean lamp at end of cycle. Option: extra self-cleaning of lamp by extra nitrogen flushing at end of cycle
<b>REPRODUCIBILITY</b>	typical <3% at 1 ppb (benzene, with capillary column)
<b>CONSUMPTION OF GAS</b>	instrument air: none! Nitrogen: quality 5.0, 4 bar, 6 ml/min
<b>DIMENSIONS</b>	19" rack, 5 standard Height Units, depth 39 cm net
<b>POWER DEMAND</b>	220 V AC, 100 VA (110 V AC available)
<b>CERTIFICATION</b>	CE approval, Approval for EN14662-3, CE approval for EMC conformity: EN 61010-1, EN 61000-6-2 and EN 60111-6-3