

Model 8900GC Application Note Acetaldehyde, Benzene, Toluene, Ethylbenzene & Xylene's in CO₂

Baseline - MOCON, Inc.™

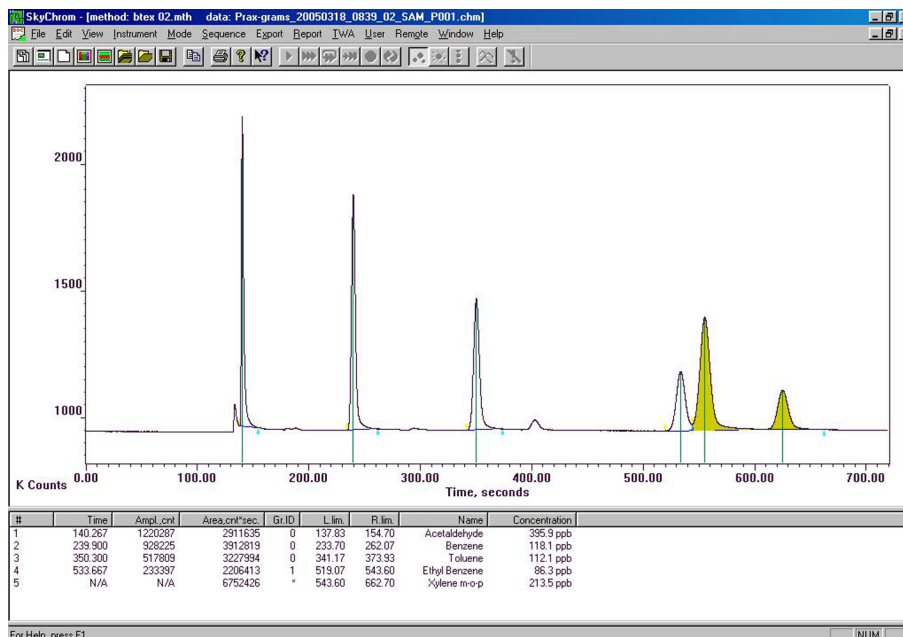
APPLICATION

The Model 8900 BTEX Analyzer provides direct measurement of Acetaldehyde, Benzene, Toluene, Ethylbenzene and Xylene's in Carbon Dioxide.

The instrument is utilized by Specialty Gas Manufacturers and the Food and Beverage Industry to monitor trace volatile organic compounds in CO₂ used in bottling beverages.

The Model 8900 BTEX Analyzer employs a photoionization detector (PID) as the sensing element. This detector is specific to volatile organic compounds. The Acetaldehyde, Benzene, Toluene, Ethylbenzene and Xylene's in the gas sample are physically separated using proprietary GC columns. A dual column configuration with timed backflush to vent is used to strip off moisture and heavier hydrocarbons. A pre-cut column is used in series with the analytical column. At sample injection a fixed volume sample is carried to the pre-cut column. Backflush is timed so that only the Acetaldehyde, Benzene, Toluene, Ethylbenzene, Xylene's and other similar components are eluted to the analytical column. Contaminants on the pre-cut column are backflushed to vent. Acetaldehyde, Benzene, Toluene, Ethylbenzene and Xylene's are separated from potentially interfering components on the analytical column and elute to the detector for analysis.

Baseline, the reference point from which all things are measured.



Chromatogram

Analysis

Analysis Time: ≤700 seconds

Detector: PID (FID Optional)

Column: Proprietary Capillary

Oven Temperature: 95°C

Carrier: Nitrogen, 20cc/min

Features

- Direct Measurement of Acetaldehyde, Benzene, Toluene, Ethylbenzene and Xylene's in CO₂
- Automatic Restart for Unattended Operation
- Automatic Zeroing for Long-Term Stability
- Local and Remote Calibration
- Analog Outputs of Acetaldehyde, Benzene, Toluene, Ethylbenzene, Xylene's and Detector Signal
- Analog Output Ranges are User Selectable
- Concentration and Diagnostic Alarm Relays
- Optional Local Area Network (LAN) Interface

Model 8000GC Application Note

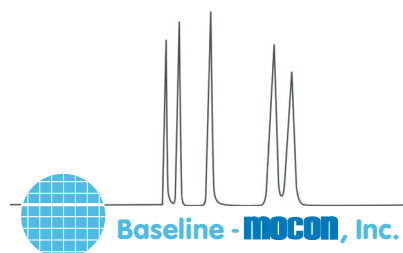
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Specifications

LOWER DETECTION LIMIT	<1 ppb Benzene
ACCURACY	1% of Full Scale
PRECISION	2% of Measured Value
SPAN DRIFT (24HR)	≤2% of Full Scale
ANALYSIS TIME	≤700 seconds
CARRIER	Nitrogen, 20cc/min typical
SAMPLE FLOW RATE	500cc/min, typical
OVEN TEMPERATURE	95°C
OUTPUT	
ANALOG	Standard: (1) 0-20ma or 4-20ma loop power supplied, isolated. Selectable for: gas concentration, unintegrated detector signal or diagnostics. Up to 16 additional programmable 0-20ma, 4-20ma or voltage outputs: 0-1V, 0-5V, or 0-10V.
DIGITAL	Standard: RS-232 output Optional: Local Area Network (LAN)
RELAYS	Standard: (5) User programmable relays for concentration and diagnostic alarms. Up to 32 additional relays available.

Represented by:



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