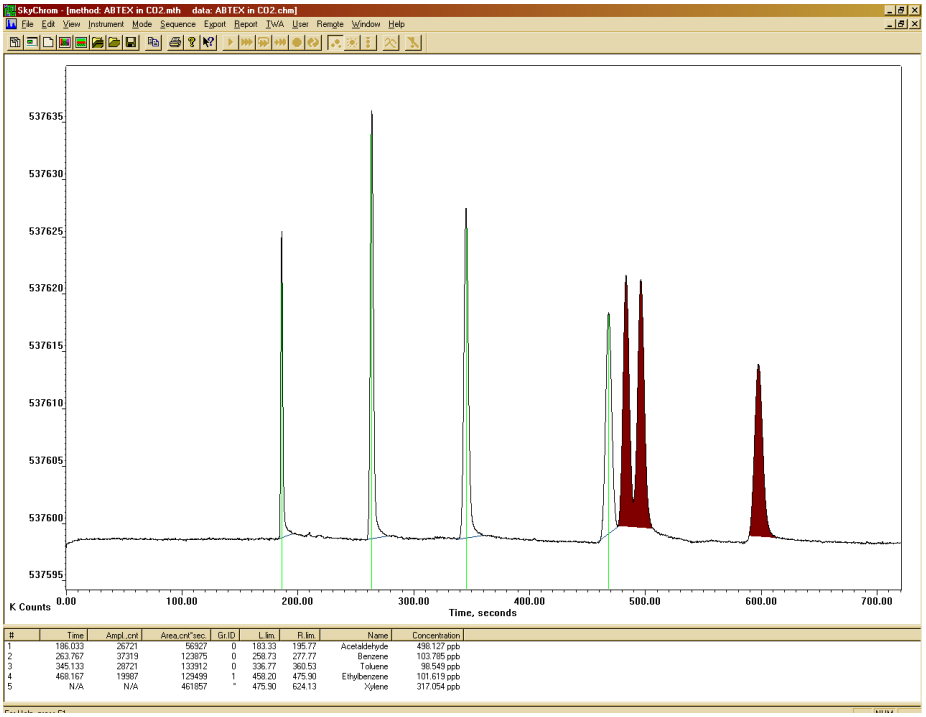
# BevAlert™ 8900GC Application Note

## *Acetaldehyde, Benzene, Toluene, Ethylbenzene & Xylenes in $CO_2$*

Baseline®- MOCON®, Inc.




## Analyzer

The BevAlert Model 8900 provides direct measurement of Acetaldehyde, Benzene, Toluene, Ethylebenzene, and Xylenes (ABTEX) in Carbon Dioxide.

The instrument is utilized by Specialty Gas Manufacturers and the Food and Beverage Industry to monitor trace volatile organic compounds in $CO_2$ used in carbonated beverages.

The BevAlert Model 8900 employs a photoionization detector (PID). The ABTEX in the gas sample are physically seperated using proprietary GC columns. A pre-cut column and an analytical column with timed backflush to vent are used to strip off moisture and heavier hydrocarbons. At sample injection, a fixed volume of sample is carried through the pre-cut column. The backflush is timed so that only the ABTEX and other similar compounds continue on to the analytical column. Contaminants on the pre-cut column are simultaneously backflushed to vent. Acetaldehyde, Benzene, Toluene, Ethylbenzene, and Xylenes are separated from potentially interfering components on the analytical column and elute to the detector for analysis.

## Application

- Measurement of ABTEX in beverage grade carbon dioxide

## Features

- Direct measurement of Acetaldehyde, Benzene, Toluene, Ethylbenzene and Xylenes in $CO_2$
- Automatic calibration for unattended operation
- Automatic baseline adjustment for long-term stability
- Analog outputs for Acetaldehyde, Benzene, Toluene, Ethylbenzene, Total Xylene concentrations
- Analog output ranges are user selectable
- Concentration and diagnostic alarm relays
- Graphic display of current or historical concentrations
- Multipoint sampling options
- RS-232 and optional LAN

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### Specifications

**Analysis Time:** 720 seconds

**Detector:** PID (FID or High-sensitivity PID Optional)

**Column:** Capillary

**Oven Temperature:** 85 °C, Nominal

**Carrier Gas:** Nitrogen, 20 cc/min, Nominal

**Lower Detection Limit:** <50 ppb Acetaldehyde, <2ppb Benzene, <5ppb Toluene, <5ppb Ethylbenzene, <5ppb Xylenes

**Accuracy:** 1% of Full-scale

**Precision:** 2% of Measured Value

**Span Drift (24HR):** <2% of Full-scale

**Sample Flow Rate:** 250-500cc/min, typical

**Output:**

**Analog:** (5) 0-20ma or 4-20ma loop power supplied, isolated. Selectable for: gas concentration, unintegrated detector signal. Options for up to 16 additional programmable 0-20ma, 4-20ma or voltage outputs: 0-1V, 0-5V, or 0-10V.

**Digital:** RS-232, optional Local Area Network

**Relays:** (5) User programmable relays for concentration and diagnostic alarms (1A @ 30Vdc). Options for up to 32 additional relays available.

**Inputs:** Digital input board for 3 contact closure inputs. Supports start analysis, start calibration, and analyze calibration gas sample.

This application note is an only an example based on customer or market specifications. These parameters are variable and therefore do not reflect all of the versatility and options of Series 8900 GC. Please contact Baseline regarding your specific application

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