

Gas Chromatography

Applications for Process and Laboratory

Automatic Environmental BTX Measurement

It is frequently necessary and required to monitor hazardous constituents in the environmental air at rather low concentration levels. The measuring concentrations can vary in a wide range depending whether point source or area monitoring is performed.

Consequently it is not uncommon that even component specific, highly sensitive detectors are not sufficient anymore to provide the required sensitivities.

On the example of monitoring BTX, the following described analyzer demonstrates that automatic on line process gas chromatographs are capable to monitor constituents with sensitivities below 1 ug/m³.

The analytical system has an integrated purge and trap column, which accumulates the constituents over several minutes. The enriched sample is purged into capillary columns, which separate the target components from others. By applying 2 capillary columns with different separation properties, utilizing the "valveless" LIVE column switching system for Backflush and heart cut to eliminate other components, resulting in an interference free separation of the target components.

Analytical System:

GC: PGC x02, MAXUM

Injection: Vapor

Columns:

Capillary Columns

Column Switching:

Valveless "LIVE"
Column Switching

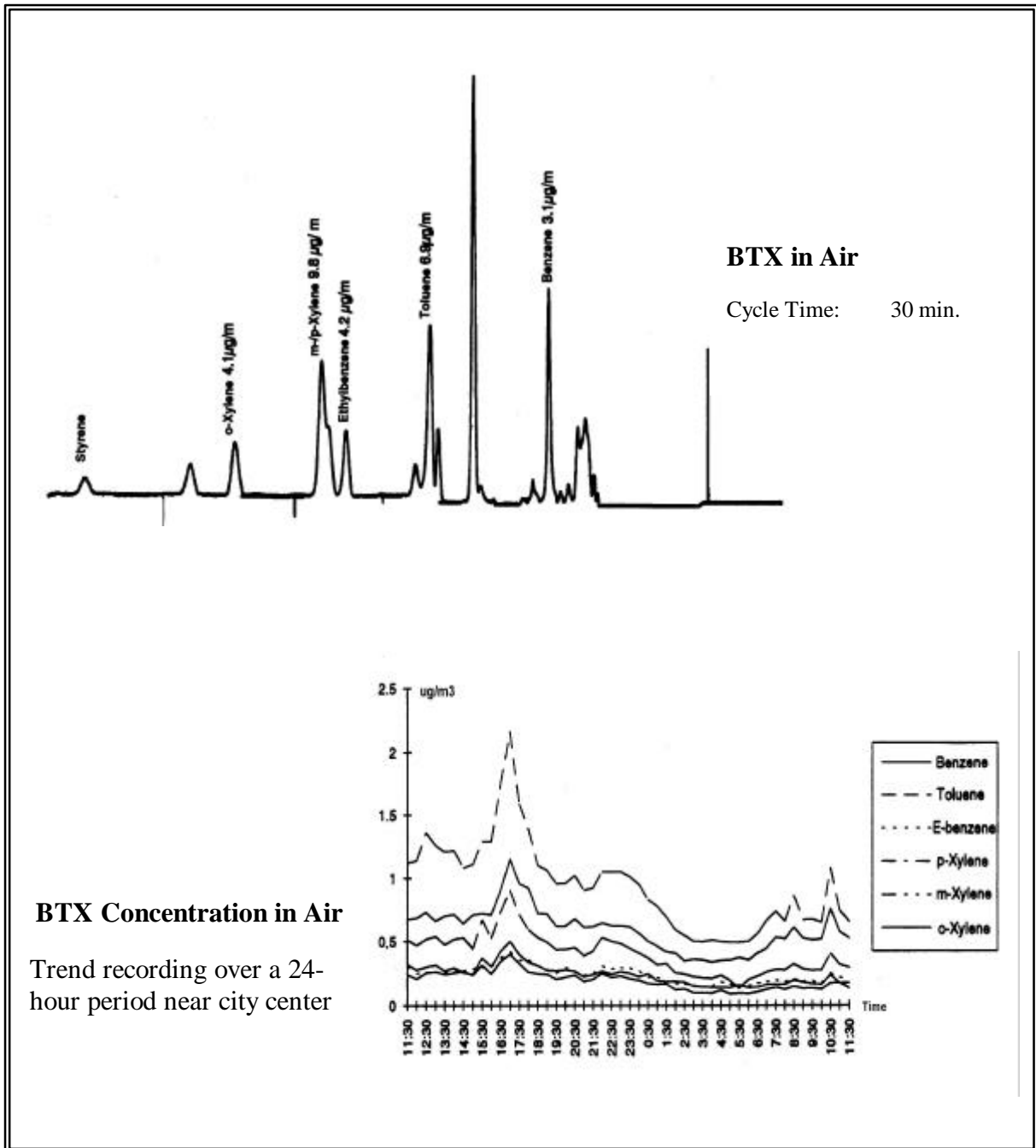
Detector:

Flame Ionization
Detector

Specialty:

On Line Enrichment,
Sensitivity about 0.1
ug/m³

SIEMENS



Siemens Applied Automation
500 W.Highway 60
Bartlesville, OK 74003
USA
Phone: ... 918 662 7000
Fax: ... 918 662 7050

Siemens AG
A&D PA 25
76181 Karlsruhe
Germany
... 49 721 595 4289
... 49 721 595 4603
<http://www.aai-us.com>

Siemens Advanced Engineering Pte Ltd.
19 A Tech Park Crescent
Singapore 637846
Singapore
... 65 897 7376
... 65 897 7353