

Gas Chromatography

Applications for Process and Laboratory

Area Monitoring of Bis Chlor Methyl Ether and Mono Chloro Di Methyl Ether

Mono Chloro Di Methyl Ether (CMME) is frequently used as chloro methylation reagent when manufacturing ion exchanger. CMME as well as Bis Chloro Methyl Ether (BCME), which often is an impurity in CMME, have been determined to be carcinogenic constituents.

In processes where CMME is present, continuous area monitoring is required for safety reasons.

Automatic On Line Process Gas Chromatographs are specifically of advantage because of its selectivity.

For a successful analytical system, specific attention has to be given to the sample

preparation system from the sampling point to the analyzer because both constituents hydrolyze readily in the presence of moisture. Because of this reason, also all surfaces coming in contact with the constituents inside the analyzer have to be inert. Utilizing capillary columns and "valveless" column switching ensures this. In order to be able to reach sensitivities below 1 ppb, an integrated automatic and on line enrichment system is used.

In addition to the separation, an electrolytic detector is used as a selective detection system and to reach the sensitivities required.

Analytical System:

GC: PGC x02, MAXUM

Injection: Vapor

Columns:

Capillary Columns

Column Switching:

Valveless "LIVE"
Column Switching

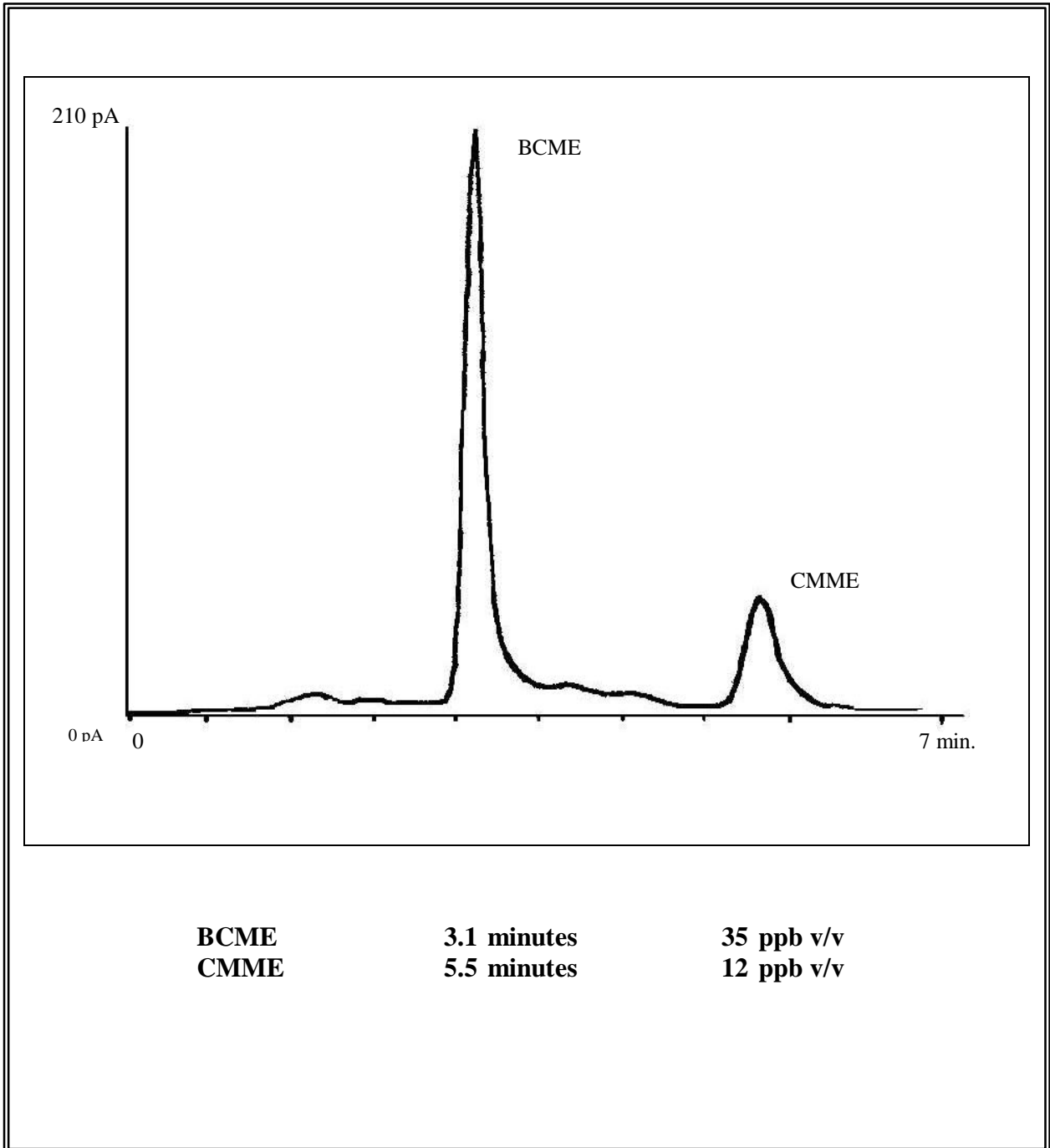
Detector:

Electrolytic Detector

Specialty:

ppb sensitivity,
Electrolytic Detector

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