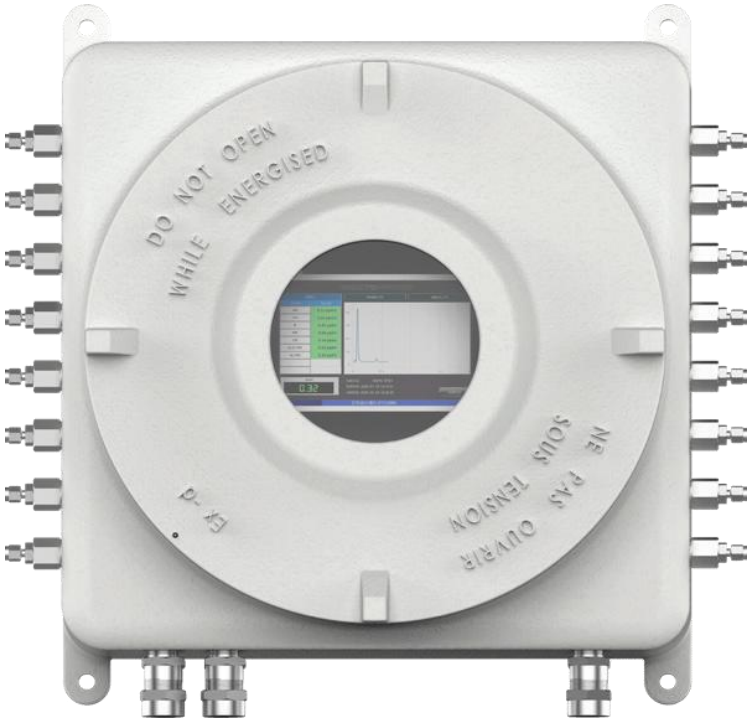
# Chromatographic Online Analyzer – Analysis of Aromatic Hydrocarbons




- Physical safety; explosion-proof system Exd IIC T6 Gb, Zone 1 & 2
- Reliable UniLite Embedded Control System
- Multiple detectors: FID, TCD, miniature TCD, FPD, etc.
- Supports switching between no fewer than 16 samples

Tel: 1 778 8310158 | Fax: 1 778 8310168 | Email: etech@etech-eie.com www.etech-eie.com

# Introduction

Applications: Analysis of the top styrene composition in of the styrene workshop; determination of ω-methylstyrene content in the top stream of ; analysis of the top and bottom streams of the benzene column; determination of the top and bottom streams of the ethylbenzene column; characterization of the feed stream at the inlet of the reverse hydrocarbonization reactor; and characterization of the outlet stream from the reverse hydrocarbonization reactor.

Media Name: Aromatic Hydrocarbons

Sample temperature (°C): (Design temperature °C)

Sampling pressure (MPa): (Design pressure MPa)

Output Signal: n-channel 4–20 mA ADC

Communication Interface: RS485 to DCS

## Report Content

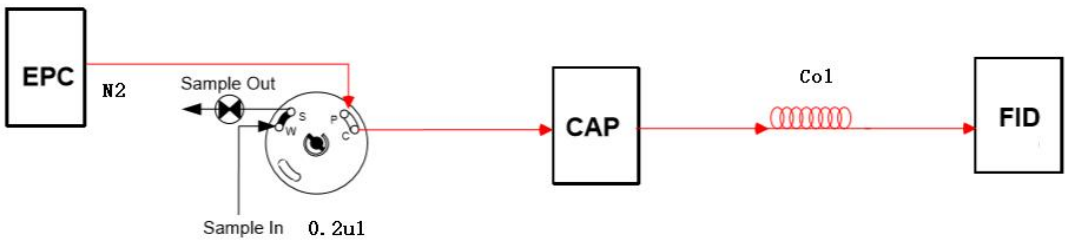
| No. | Component Name | unit |
|---|---|---|
| 1 | Non-aromatics | wt% |
| 2 | Benzene | wt% |
| 3 | Toluene | wt% |
| 4 | Ethylbenzene | wt% |
| 5 | p- Xylene | wt% |
| 6 | m- Xylene | wt% |
| 7 | o- Xylene | wt% |
| 8 | Styrene | wt% |
| 9 | C9+ Aromatics | wt% |

# Technical Features

Analysis Procedure: UOP 744-06 Gas Chromatographic Method for Determination of Aromatic Hydrocarbons in Hydrocarbon Mixtures.

Analysis Principle: An aromatic hydrocarbon sample is injected into a gas chromatograph equipped with a fused silica capillary column coated with cross-linked polyethylene glycol and a flame ionization detector (FID). The concentration of each component in the sample (% by mass) is determined by applying the relative response factor to correct for the detector's mass response error, followed by normalization based on peak area.

Detection Schematic Diagram




# EIE

## Chromatographic Online Analyzer – Analysis of Aromatic Hydrocarbons

## EIE-AAH-01

| Basic mechanical and electrical parameters | |
|---|---|
| Enclosure | flameproof enclosure |
| Height and Depth | 500mm × 500mm, depth 350 mm |
| Weight | 50KG |
| Certifications | ATEXIICT6,ZONE1,2 |
| Power Input | 100–240 VAC, 50–60 Hz, maximum power of 300 W |
| Communication Mode | RS485,Ethernetx1, |
| Screen Size | standard configuration |
| 4- 20 mA Output | Support (optional) |
| MODBUS | Support (Standard) |
| I/O Output | Instrument status, alarms, hardware errors, maintenance (all I/Os are configurable) |

| General Parameters for Chromatographs | |
|---|---|
| Chromatographic Column Type | Filling Column & Capillary Column |
| Heating method for the chromatographic column | constant temperature |
| Valve Type | Switching valve/membrane valve, operating temperature range 0–225°C |
| Airway Control Method | Full pneumatic EPC control system |
| Detector Type | FID |
| Keypad | configurable explosion-proof keyboard |
| Instrument Reverse Control Software | Equipped with built-in UniLite® system control software, it automatically performs sampling, analysis runs, and periodic calibration/system response measurements. |
| Communication Port Configuration Software | Modbus or other industrial standard protocols |
| Analog Output | Supports no fewer than 32 channels |
| Multiple-sample testing | Supports cyclic sampling at over 16 sampling points (optional) |
| control software | UniLite Industrial Edition |
| detector guard | FID: Automatic ignition; automatic gas cutoff upon fire suppression; alarm function |