



eGC[®] *environmental* Gas Chromatograph Ethylene Oxide in Ambient Air

The eGC measures trace (i.e. ppbv) levels of ethylene oxide in ambient air in chemical manufacturing and sterilization facilities. The eGC is ideal for a fence-line or remote monitoring applications where the specific measurement of ethylene oxide in atmospheres containing interfering chemicals is essential.

INTRODUCTION

The eGC automatically samples the air, performs a gas chromatographic analysis and sends a report on a ten-minute cycle. The system generates a continuous record of ethylene oxide emissions that is logged on the eGC and also uploaded to a user-accessible web server via an on-board cellular modem. The eGC is unique in its ability to operate in uncontrolled hot and cold environments. The

wind speed and direction sensor makes the eGC a highly effective area monitor, giving a near real-time picture of the site emissions. Using an array of eGC units for vector triangulation of emissions provides a way to quickly locate emission sources. The near real-time reporting of the eGC provides valuable temporal information that is complementary to sample canister or passive tube collection methods.

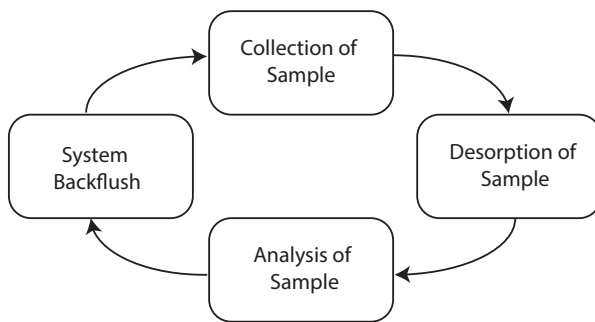
eGC ADVANTAGES

- Fully autonomous operation
- No shelter or wiring construction required
- Automatic calibration
- Laboratory level data quality assurance
- Analysis data fused with local weather conditions and GIS position
- Intuitive graphical data web site
- E-mail and text alarm alerts
- Limited maintenance

SAMPLE ANALYSIS METHOD

The eGC uses a selective sorbent trap and thermal desorption to inject a sample of ambient air into the gas chromatograph. The GC column separates ethylene oxide from other chemicals in the sample. These chemicals elute sequentially into a solid-state hydrocarbon detector that measures the ethylene oxide present and generates the analytical result. Upon completion of the analysis time, the GC system is automatically backflushed and prepared for the following analysis.

eGC Analysis Cycle



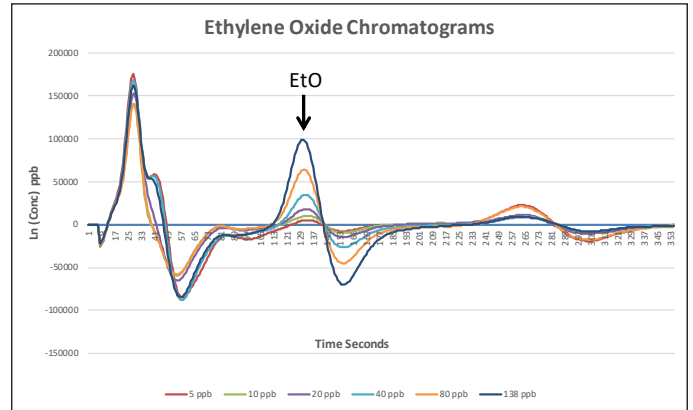
ANALYSIS SPECIFICATIONS

Ethylene Oxide

Measurement Range:	5.0 to 200ppb
Analysis Time:	10 Minutes
Column:	0.53mm x 10m
Column Temperature:	+55°C
Amibent Temperature:	-10°C to +45°C
Power Input:	12 VDC @ 5A (max) 110-240 VAC
Analysis Precision:	±5%

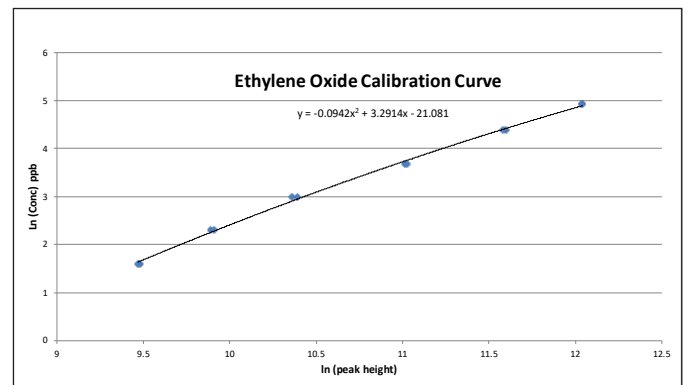
ETHYLENE OXIDE CHROMATOGRAMS

5ppb to 138ppb



ETHYLENE OXIDE CALIBRATION CURVE

Calibration Range 5.0ppb to 200ppb



eGC ORDERING INFORMATION

Contact ENMET's application team for additional information.



680 Fairfield Court
Ann Arbor, MI 48108 USA
PH: 734-761-1270
www.enmet.com