ALS Environmental Hawarden
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Method Summary

Determination of Monoethylene Glycol in Distributed Natural Gas by Thermal Desorption and Gas Chromatography

Scope and Range

This procedure applies to the monitoring of monoethylene glycol (MEG) on Tenax sorption tubes, after natural gas is pumped through. This compound is added to natural gas in the UK to prevent seals at pipe joints drying out and therefore preventing leakage.
Method range: 0.3 – 9.0 µg/tube.

The method is accredited to ISO 17025 for the µg/tube raw results produced by the instrument.

Principle

Preparation and Extraction
Samples are collected at source by passing a known volume of natural gas through a steel tube packed with adsorbent. The tube capped is with storage caps and dispatched. Analysis of the tubes should start within a week of sampling. Tubes that are not used within one month of dispatch should be returned to the lab for desorbtion. Tubes are cleaned by running them through an analytical cycle. Before the tubes are loaded onto the instrument they are rolled them over a flat surface to ensure they have not been bent as bent tubes will jam in the autosampler. Storage caps are replaced with analytical caps, making sure that the tube is opened for as short a time as possible. Whilst changing caps, the retaining gauze is checked to ensure it has not been displaced and that the adsorbent is not leaking. If a tube is leaking, then it is not to be used for analysis until it has been repacked.

Analysis
Samples are analysed by GC-FID and Thermal Desorber. Results will be processed automatically but any results close to the limit of detection should be checked by the analyst and compared to a standard trace from the same run to ensure the correct peak has been identified.

Interferences

None known.