Pace Analytical®

TECHNICAL BULLETIN

TECHNICAL NOTES

Testing for Volatile Organic Compounds in Ambient Air Collected in Canisters and Analyzed by GC/MS EPA Method TO-15

Method Overview

Method TO-15 provides procedures for the sampling, detection and quantitative measurement of Volatile Organic compounds (VOC's) in ambient air. TO-15 is one of the EPA's, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. This method is designed for samples collected in Summa® canisters and analyzed by gas chromatography/mass spectrometry (GCMS). The method compound list includes 59 VOC's which are also identified as hazardous air pollutants (HAP's) in Title III of the Clean Air Act amendments of 1990.

Method Detection and Reporting Limits

Detection limits achieved by Method TO-15 are less than 0.2 ppbv for most target compounds. Actual detection limits may vary slightly due to the volume of air brought into the sample canister. Reporting limits are less than 1 ppbv for all TO-15 compounds. See Pace Analytical TO-15 MDL Studies for specific compound lists and reporting limits.

Method Specifications

Method Holding Time: - Analyzed within 14 days of collection*.

** Canister stability studies indicate, under normal usage, most VOCs can be recovered from canisters at or near their original concentrations after storage of up to 30 days.*

Method Turnaround (TAT): - 10 working days.

Method QAQC:
- ICAL performed as specified by the method.
- Continuous calibration monitored daily or every 12 hours.
- Lab Blank/Batch (maximum 20 samples).
- Internal standard recoveries monitored continuously.

Method Sampling Guide

Samples for analysis by Method TO-15 can be gathered as grab samples, or as time composites of 1-24 hours utilizing a pneumatic flow controller. Detailed sampling instructions and equipment are available for both procedures. Pace Analytical Summa® canisters are leak checked, cleaned, tested for contamination, evacuated, and certified for reuse in accordance with method QC requirements prior to shipment. Upon completion of sampling, ship canister to the laboratory via overnight carrier using the original protective carton, and include a completed chain of custody document.

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