# **SERVICES SUMMARY TO9A**

TESTING FOR POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS BY HIGH RESOLUTION GC/MS: EPA TO9A



Polychlorinated Dibenzo-p-dioxin

#### **METHOD OVERVIEW**

Method T09A provides procedures for the sampling, detection and quantitative measurement of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (tetra through octa) in ambient air samples collected by high volume sampler equipped with a quartz-fiber filter and polyurethane foam (PUF) cartridge. The analysis calls for the use of Gas Chromatography/High-resolution Mass Spectrometry (GC/HRMS) on purified sample extracts. Method T09A is normally utilized in a perimeter or fence line monitoring mode around incinerators, chemical production facilities or Superfund sites, in support of the Clean Air Act (CAA).



Polychlorinated Dibenzofuran

## APPLICATION

Calibrated PUF high volume samplers are used to collect containments within ambient air. Upon installation of the PUF cartridge (and filter) the operator is able to program a PUF high volume sampler to collect enough volume required for TO9A. Typical collection volumes range from 325m3 to 400m3 of ambient air over a 24hr period. Pace® Analytical will provide a PUF cartridge (pre-spiked with labeled PCDD/PCDFs) and different filter sizes can be available upon request. Due to pre-spike, please handle all PUF cartridges with care, and call the laboratory if cartridge is broken. Pace® Analytical does not supply PUF high volume samplers. For a complete list of reportable analytes and current limits, please contact Pace® Analytical.

METHOD	CONGENERS	DESCRIPTION	MATRIX	RL/PQL <sup>1</sup>	TAT <sup>2</sup>	CONTAINER	PRESERVATION*	HOLD TIMES <sup>3</sup>	MIN VOLUME
T09A4	PCDDs/PCDFs	Ambient Air   17 Dioxin/Furan congeners and Totals	AIR	10-100 PG/S	10 Days	High Vol PUF/Filter	Refrigerate <6° C	7 Days	Per Method
NOTES									
1. RLs/PQLs subject to change, please contact lab for current limits.					3. Some State or Federal agencies may have alternative hold times and those must be met.				
<ol> <li>Standard TAT is measured by business days – rush/customized TAT may be available by prearrangement.</li> </ol>					4. Sample Train preparation fee will be charged separately. Air samples can be calculated by "per sample," or by recorded volume sampled.				
					*All methods require samples to remain in darkness or out of direct contact with sunlight.				

#### SAMPLING MEDIA

- One PUF cartridge (includes pre-spike of labeled PCDD/PCDFs surrogate compounds)
- Pre-cleaned, quartz filter (must specify size)

Pace<sup>®</sup> Analytical will provide appropriate media upon request. PUF cartridge may differ than shown.

#### **METHOD QAQC:**

- Labeled internal standard recoveries are continuously monitored to ensure data quality and method compliance.
- Lab Blanks 1 per 20 samples.

### **CERTIFICATIONS:**

A2LA · Multiple States · ISO/IEC 17025: 2017

#### **INSTRUMENTATION:**

- 3 GC/HRMS Autospec Ultima High Resolution Mass Spectrometers
- 3 HRGC/HRMS Autospec Premier High Resolution Mass Spectrometers



Pace<sup>®</sup> Analytical Field Services Division is accredited for stack emission sampling and on-site process monitoring. Please contact your local sales executive for more information on our Stack Testing services. Pace<sup>®</sup> Analytical recommends using proper PPE and following site specific safety requirements. Trained personnel should perform sampling operations.