

EPA Region IV is seeking possible participants in an EPA OSW method validation study for a new proposed SW-846 method to measure toxaphene and toxaphene congeners using Negative Ion Mass Spectrometry (GC / NIMS). Below is a brief summary of a validation study we are hoping to initiate during mid-July 2008:

## **Toxaphene and Toxaphene Congeners by Gas Chromatography / Negative Ion Mass Spectrometry (GC / NIMS)**

### **1.0 Introduction**

The U.S. EPA OSW is undertaking an interlaboratory collaborative study to validate the use of Draft Method 8276 for the analysis of toxaphene and toxaphene congeners using GC/NIMS. This validation study will evaluate the method for recoveries of toxaphene and toxaphene congeners in a variety of matrices using GC separation and NIMS detection. The validation study will be conducted in two phases as described below. The instructions herein pertain to Phase I testing.

### **Phase I: Initial Demonstration of Proficiency (IDP)**

Phase I will consist of an IDP evaluation in order to identify qualified laboratories for participation in the actual Method 8276 validation study. The IDP evaluation will be based on the analysis of spiked solvents with known concentrations of toxaphene and toxaphene congeners. It is anticipated that the spiking levels will consist of a low-level and mid-level concentration relative to the expected calibration range. The actual concentrations will not be revealed to the laboratories. Laboratories that meet the IDP toxaphene and toxaphene congeners recovery performance criteria will be selected for participation in Phase II of the validation study. For the Phase I analyses, laboratories are expected to follow the analytical approach and conditions as outlined in Method 8276.

The following list of compounds will be used for the Phase I IDP study:

<b>Compound</b>	<b>CAS Registry No.<sup>a</sup></b>
Toxaphene	8001-35-2
<b>Toxaphene Congeners:</b>	
2-exo,3-endo,6-exo,8,9,10-Hexachlorobornane (Hx-Sed)	57981-29-0
2-endo,3-exo,5-endo,6-exo,8,9,10-Heptachlorobornane (Hp-Sed)	70649-42-2

<b>Compound</b>	<b>CAS Registry No.<sup>a</sup></b>
2-endo,3-exo,5-endo,6-exo,8,8,10,10-Octachlorobornane (P26)	142534-71-2
2-endo,3-exo,5-endo,6-exo,8,9,10,10-Octachlorobornane (P40)	166021-27-8
2-exo,3-endo,5-exo,8,9,9,10,10-Octachlorobornane (P41)	165820-16-6
2-exo,5,5,8,9,9,10,10-Octachlorobornane (P44)	165820-17-7
2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-Nonachlorobornane ( P50)	6680-80-8
2,2,5,5,8,9,9,10,10-Nonachlorobornane ( P62)	154159-06-5

### **Phase II: Method Validation on Real World Matrices**

Phase II participants will evaluate the method for reproducibility, linearity, accuracy and precision across a variety of real world test matrices (i.e. soil, sludge, and fish tissue). Following Phase II validation testing, a statistical evaluation of the data will be performed in order to establish method precision and bias. The final version of Method 8276 will be modified based on the results of the Phase II validation study. Alternate analytical technologies, if applicable, that provide equivalent performance to the currently described 8276 GC/MIMS technology will be incorporated into the final method version.

We are anticipating that all laboratories participating in both Phases I and II of the study will be provided with prepared calibration standards along with any necessary QC standards. For the purposes of this method evaluation we are only interested in the determinative analytical approach and therefore, no sample extract preparation will be necessary. Should you have any additional questions, please feel free to contact me. We look forward to hearing from you regarding your possible study interest. Thanks!

Ray

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