Sample Preparation for Dioxin and PCB Analysis: Conventional vs. Supelco System

**Conventional Silica Column Method**

- **Day 1**: Sample Received
- **Day 2**: Extraction of sample and spike with 13C internal standards
- **Day 3**: Multilayer silica column chromatography (clean up), concentration of extract
- **Day 4**: Isolation and separation of analytes of interest (PCDD/PCD/PCB* etc.)
- **Day 5**: HRGC/HRMC analysis and data processing

**Dioxin Preparation Systems**

- **Day 1**: Sample Received
- **Day 2**: Silica column chromatography and analyte isolation is combined into one step
  - No additional concentration step is required
- **Day 3**: *Some PCB samples may require additional Basic Alumina clean up to remove saturated hydrocarbons*

**1 fully trained technician / 8 samples**

- PCDD/Fs: 4 working days
- PCBs: 5 working days
- Additional Tasks: Packing and activation of columns (1 day)

**1 fully trained technician / 9 samples**

- PCDD/Fs: 3 working days
- PCBs: 4 working days
- Additional Tasks: None