



Method Summary

Determination of Total Polychlorinated Biphenyls (PCBs) as Aroclor 1254 in Waters

Scope and Range

Polychlorinated biphenyls (PCBs) are a group of 209 different chlorinated biphenyl congeners that can be grouped as ten homologues. These homologues are isomers exhibiting the same levels of chlorination (i.e. dichlorobiphenyl, trichlorobiphenyl, tetrachlorobiphenyl, etc). The ability to detect, identify and quantify the presence of PCBs in food, crops, natural waters, air and animals is essential to understand their impact on the environment and our food supply. PCBs are classified as carcinogenic compounds and are monitored in a wide range of environmental matrices.

This method describes a procedure for the detection and quantification of the total PCBs in a sample as Aroclors (multi-component mixtures), normally as Aroclor 1254. This method is applicable for analysis of waters and leachates.

The Limit of Report (LOR) for this method is 1 µg/L.

Calibration Range: LOR to 125 µg/l.

Principle

Preparation and Extraction

Samples should be collected in glass containers and kept cooled during transportation. Samples are extracted using liquid/liquid extraction.

Analysis

Analysis is undertaken by GC-MS using Selective Ion Monitoring (SIM).

Interferences

By using GC-MS in SIM, there are few significant interferences.