

ABA LAB CERTIFICATION MEMORANDUM 2019-2: CARBON TETRACHLORIDE (CCl₄) BEING USED AS A REAGENT

To: ABA/USACE Certified labs
From: ABA, LCP
CC: USACE LCT
Date: 4 August 2019

Subject: Carbon Tetrachloride (CCl₄) is NOT ACCEPTABLE as a Reagent for ASTM D2172, Quantitative Extraction of Bitumen

Please be advised that Carbon Tetrachloride with the chemical formula (CCl₄) being used by the laboratories as a reagent for bitumen extraction has been discontinued by ASTM as an acceptable reagent due to the health risks to Technicians using the chemical. The only currently acceptable extraction reagents, per ASTM D2172 are:

- **Ammonium Carbonate Solution**
- **Methylene Chloride,**
- **normal-Propyl Bromide (nPB)**
- **Trichloroethylene**

SAFETY FIRST

Handling and Storing Chemicals- General Guidelines

First—the right personal protective equipment (PPE)

1. Make sure you have proper PPE. At a minimum, this should include appropriate chemical-resistance gloves and eye protection, closed-toe shoes (essential for working in the laboratory), and lab coats.

To store chemicals safely, DO the following:

1. Label all chemical containers fully. We recommend including the owner's or user's name along with the date received.
2. Provide a specific storage space for all chemicals used in the lab, and ensure return after each use.
3. All chemicals are to be stored in a safe manner, so fumes are ventilated and possible leaks to chemical containers are contained without discharge to soil, groundwater or sewer drains.
4. MSDS for all chemicals used in the lab shall be placed at the laboratory units so that all employees who will be using the material must be aware of its hazards, proper work procedures, and personal protective equipment requirements.

And AVOID doing the following:

1. Storing large, heavy containers or liquids on high shelves or in high cabinets. Instead store these at shoulder level or below.
2. Storing chemicals near heat sources or in direct sunlight.

Following these simple guidelines will get you well on the way to an efficient, organized, and safely operating laboratory

NOTE: For more information about First Aid Measures, and Disposal, please refer to MSDS for all chemical used in your lab.