

NCDWR-Water Sciences Section-Chemistry Laboratory  
Soil & Sediment Samples – Containers, Preservation, Hold Times Table

| <b>Soil &amp; Sediment Samples: Containers, Preservation and Hold Times Table</b>  |                                |  |  |  |
|--|--------------------------------|--|--|--|
| <b>North Carolina Division of Water Resources, Water Sciences Section – Chemistry Laboratory</b>   |                                |  |  |  |
| Listed below is information on the collection and preservation of soil and sediment samples. The amount of sample listed is for average conditions; therefore, if you suspect that unusual conditions or interferences exist, please submit double the amount of sample. |                                |  |  |  |
| <i>*WHEN SUBMITTING SOIL AND SEDIMENT SAMPLES, A SEPARATE SAMPLE CONTAINER MUST BE COLLECTED FOR EACH OF THE ANALYTICAL GROUPS LISTED BELOW:</i>   |                                |  |  |  |
| <b>Parameter</b>   | <b>Minimum Required Volume</b> | <b>Container<sup>1</sup> P-Plastic G-Glass</b> | <b>Preservation<sup>2</sup></b>                                  | <b>Maximum Holding Time<sup>3</sup></b>    |
| Oil and Grease   | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | 1 ml of concentrated HCl per 100 grams soil to pH < 2; Cool ≤6°C | As soon as possible                        |
| Metals:<br>Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr (Total), Cu, Fe, K, Li, Mg, Mn, Na, Ni, Pb, Sb, Sn, Se, Tl, V, Zn and Hg   | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | Refer to aqueous guidelines                |
| Pesticides & PCBs (OC/ON/OP)   | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days to extract; analyze w/in 40 days   |
| Acid Herbicides  | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days to extract; analyze w/in 40 days   |
| Semi-Volatile Organics (BNAs)  | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days to extract; analyze w/in 40 days   |
| Volatile Organics (VOA)  | 4 oz. jar + trip blank         | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days                                    |
| TPH Gas Range (soil)   | 4 oz. jar + trip blank         | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days                                    |
| TPH Diesel Range (soil)  | 8 oz. jar                      | <i>G - Teflon-lined cap or septum</i>          | Cool ≤6°C  | 14 days to extract; analyze within 40 days |

**Footnotes:**

- (1) The container types listed are those commonly used throughout the Division. Other container types may be acceptable. Please consult the laboratory about use of proper containers before deviating from those listed. (P-plastic, G-glass, P (disposable)-Plastic Disposable bottle)
- (2) Sample preservation should be performed immediately upon collection. For composite samples, each aliquot should be preserved at the time of collection. When use of an automated sampler makes it impossible to preserve each aliquot, then the samples may be preserved by maintaining at ≤ 6° C until compositing and sample splitting is completed.
- (3) Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before analysis and still be considered valid. Collection times must allow for sample preparation and analytical setup. Some samples may not be stable for the maximum time period given in the table. Collectors are obligated to hold the sample for as short a time as possible especially if knowledge exists showing that this is necessary to maintain sample stability.

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