

Appendix XIV Physical Tests

Note:

1. Atterberg Limits

Liquid Limit: Casagrande Method, ASTM D423-72

Plastic Limit: Atterberg Method, ASTM D424-71

Plasticity Index: Liquid Limit - Plastic Limit

2. Moisture Content

Sample preparation: bulk sample weighed in tared container

Analytical Method: oven dried for 24 hours (~105°C); resulting weight loss expressed as percentage of the dry sediment weight

3. Conductivity

Sample preparation: sample soaked and stirred for 60 minutes with distilled water; set for 4 hours

Analytical Method: conductivity cell inserted in sediment placed in non-conductive beaker

4. pH

Sample preparation: air dried sample sieved at 10 mesh (<2 mm); 10 g soaked with CaCl₂

Analytical Method: Omega PHH-7X pH pen

5. LOI

Sample preparation: oven dried sample sieved at 230 mesh (<0.063 mm)

Analytical Method: 0.5 to 0.6 g heated at 550°C for one hour; resulting weight loss expressed as percentage of the dry weight

6. Organic C:

Sample preparation: air dried sample sieved at 230 mesh (<0.063 mm)

Analytical Method: 350 g analysed with Leco CR-412 Carbon Determinator