1 ounce = 6 teaspoons

1 teaspoon = 1/6 ounce

REDOX POTENTIAL (EH)

Principle measure redox potential in sediments

Equipment: platinum electrode
redox potential meter (WTW Wiss. Techn. Werkstätten D812 Weilheim)
calomel reference electrode
calibration solutions

Calibration

1. mix solutions of the following: 0.17 oz. (4.8195 g)
   pH buffer 4.0 (100ml) and a teaspoon of quinhydrone (~ -210mV expected)
   pH buffer 7.0 (100ml) and a teaspoon of quinhydrone (~ -40mV expected)
2. cover bottles in foil – they will last approx. one week
3. let solutions stand overnight prior to attempting calibration
4. insert electrodes in the calibration solutions and let meter equilibrate
5. record values, should be close to the above expected values

Procedure

1. warm up meter
2. calibrate
3. insert both electrodes into sediment, make sure they do not touch
4. read meter (the more positive = the more reduced)

Calculation Eh (mV) = (reading * -0.048) + 240.083

Note qualitative measurements only
refer to Jones RH (1968) Oxidation-reduction potential measurements ISA J 13:40-44
IN Bohn 1971 (B107)