NITRIFICATION POTENTIAL ASSAY
AIR RESOURCES BOARD PROJECT
June 23, 1995

Preparation.
1. 0.2 M KH₃PO₄ Solution: Dissolve 2.722 g KH₃PO₄ in 100 mL H₂O.
2. 0.2 M K₂HPO₄ Solution: Dissolve 3.843 g K₂HPO₄ in 100 mL H₂O.
3. 50 mM (NH₄)SO₄ Solution: Dissolve 0.6607 g (NH₄)SO₄ in 100 mL H₂O.
4. Flocculant Solution: Dissolve 7.35 g CaCl₂·2H₂O and 10.15 g MgCl₂·6H₂O in 100 mL H₂O.
5. Nitrification Potential (NP) Solution: dilute 7 mL Solution 1, 18 mL Solution 2, 50 mL Solution 3, and 5.35 g NaClO₃ to 5 L, and pH to 7.2.
6. Label 4 Lachat tubes for each soil.

Method.
1. Measure 100 mL of NP solution into 250 mL Erlenmeyer flasks.
2. Weigh out 10 g fresh soil into each flask.
3. Place on orbital shaker, 60 cycles / min.
4. At 2, 8, 14, and 24 hours, transfer 10 mL of suspension from each flask to centrifuge tubes.
5. Add a few drops of flocculant solution to each sample.
6. Centrifuge at 3000 rpm for 10 min.
7. Pour off supernatants into Lachat tubes, cap, and freeze.
8. At the conclusion of 24 hours, sieve the residues from the soil slurries through a 2 mm mesh.
9. Place the rocks in weighing tins, and dry in a 70° C oven overnight.
10. Record the dry rock weights from the soil slurries, then discard the rocks.