INTRODUCTION

The importance of nitrogen to plant life has been outlined in the accompanying handbook, A Study of Soil Science. In this exercise the student will:

A. Study the color reaction of High Fertility Soil (5724) which contains a high nitrogen content.

B. Test a soil of unknown value to determine if nitrogen is present and if so, determine the relative level of nitrogen that is present in the soil sample.

The soil samples may be furnished by the instructor or collected and prepared by the student.

PROCEDURE

1. Fill a graduated tube (0755) to line 7 with Nitrogen Extracting Solution (5702).

2. Use the 0.5g spoon (0698) to add one measure of the soil sample to the test tube. Cap and shake gently for one minute.

3. Without removing the cap, allow the tube to stand undisturbed until the soil particles settle and the liquid above the soil becomes clear.

4. Transfer this clear liquid to a second test tube (0755) with the pipet (0364). To accomplish this, squeeze the bulb of the pipet before inserting into the test tube containing the soil and extracting solution. This prevents agitation of the clear solution. After insertion release the pressure on the bulb and “draw-up” a portion of the clear extracting solution. Transfer this amount to the second test tube. Continue to transfer clear soil extract in this manner until the level of solution is even with line 3 of the second test tube.

5. Use the 0.25 g spoon (0695) to add two measures of *Nitrogen Indicator Powder (5703) to the soil extract in the second tube. Cap the tube and shake gently to mix.

6. Wait 3 minutes for the red color to fully develop. Compare the test color with the Nitrogen Color Chart (1371). What color appeared? What was the nitrogen level of the sample: High? or Medium? or Low?
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