

## Density

### 1. Scope:

To provide a procedure for the determination of density in liquid fertilizers.

### 2. Principle:

The sample is added to a tared volumetric flask and weighed. The density of the sample is calculated by dividing the sample weight by the volume of the flask used. Samples are prepared according to RA-SP-SMPL-PREP.

### 3. Safety:

Gloves, safety glasses, and a lab coat shall be worn when performing this analysis. Care must be taken when weighing fertilizer samples as some samples contain hazardous chemicals such as phosphoric acid.

### 4. Equipment:

- 4.1. Analytical balance capable of weighing to 0.1 mg
- 4.2. Class A volumetric flask – 100mL

### 5. Analysis:

- 5.1. Place the volumetric flask on the balance and tare the balance.
- 5.2. Mix the sample thoroughly and fill the flask to the line.
- 5.3. Record the weight and the room temperature.

### 6. QA/QC:

A laboratory control sample should be run with each set. If one is not available, an old sample previously run for density may be used.

### 7. Calculations:

$$\text{Density} = \frac{\text{Weight of Sample (g)}}{\text{Volume of sample (mL)}}$$

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