

Method of Test for
PERCENT SOLIDS OF HERBICIDE APPLICATION AID
DOTD Designation: TR 507-93

I. Scope

This method determines the percent solids of herbicide application aid.

II. Apparatus

- A. Analytical balance - 120 g capacity sensitive to 0.0001 g.
- B. Drying oven - capable of maintaining a temperature of $105 \pm 3^{\circ}\text{C}$ ($220 \pm 5^{\circ}\text{F}$).
- C. Desiccator.
- D. Aluminum weighing dish - approx. 5/8 in. deep with an approx. 2 in. inside diameter.
- E. Thermal gloves, apron, tools, eye protection - for handling hot materials.
- F. Worksheet - Herbicide Application Aid. (Figure 1)

III. Sample

The sample shall consist of approximately 1 qt of herbicide application aid. The test specimen shall consist of approximately 2 g of herbicide application aid.

IV. Health Precautions

Proper equipment and precautions are to be used whenever hot materials or equipment must be handled. Use container holders or gloves while handling hot containers.

V. Procedure

- A. Shake the sample.
- B. Weigh the aluminum weighing dish.
- C. Record the weight to the nearest 0.0001 g.
- D. Pour the 2 g specimen into the aluminum weighing dish.
- E. Weigh the dish with specimen.
- F. Record the weight to the nearest 0.0001 g.
- G. Place the dish with the specimen in an oven operating at a temperature of $105 \pm 3^{\circ}\text{C}$ ($220 \pm 5^{\circ}\text{F}$) for approx-

imately 24 hours or until a constant weight is achieved.

Note: Constant weight for drying purposes is defined as less than 0.1% weight loss between successive weighings no less than 15 minutes apart.

- H. Remove the dish with specimen from oven and place in desiccator until cool.
- I. Remove the dish with specimen from desiccator, weigh and record the weight to the nearest 0.0001 g.

VI. Calculations

Calculate the % solids (C) using the following formula:

$$C = \frac{B}{A} \times 100$$

where:

- A = specimen weight before drying, g
- B = specimen weight after drying, g
- 100 = constant

example:

- A = 2.2106
- B = 0.6895

$$C = \frac{0.6895}{2.2106} \times 100$$

$$= 0.3119 \times 100$$

$$= 31.19$$

$$C = 31 \%$$

VII. Report

Report the percent solids to the nearest whole number.

VIII. Normal Test Reporting Time

Normal test reporting time is 2 days.

