

# Tex-605-J, Percent Solids by Weight of Latex Emulsions

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## **Section 1**

### **Overview**

Effective dates: August 1999–December 2007.

This test procedure determines the total solids content by weight of latex emulsions.

## **Section 2**

### **Apparatus**

The following apparatus is required:

- ◆ natural convection electric oven capable of maintaining a temperature of 105 to 110°C (221 to 230°F)
- ◆ analytical balance with a minimum capacity of 100 g
- ◆ vacuum desiccator
- ◆ indicating type silica-gel desiccant
- ◆ aluminum solids content dish 51 mm (2 in.) in diameter
- ◆ tongs.

### Section 3 Procedure

The following procedure describes the percent solids by weight test.

<b>Percent Solids by Weight Test</b>	
<b>Step</b>	<b>Action</b>
1	Weigh an aluminum solids content dish to the nearest 0.1 mg.
2	Weigh into the dish a 1 to 1.5 g sample of the latex emulsion.
3	Spread the emulsion over the entire bottom surface of the dish.
4	Place the dish with sample in an oven at 105 to 110°C (221 to 230°F) for three hours.
5	Remove the dish from the oven and place in desiccator until cool.
6	Weigh dish and residue and return to the oven for an additional hour.
7	Remove from oven, place in desiccator, cool and weigh.
8	Repeat Steps 4 through 7 until weight loss does not exceed 1 mg

## **Section 4 Calculations**

Use the following calculation to determine percent solids by weight.

$$\text{Solids Content} = \left[ \frac{(\text{Wt. of dish + residue}) - \text{wt. of dish}}{\text{Weight of Sample}} \right] \times 100$$