1 **Scope:**

1.1 This method is utilized to determine the water insoluble residue of PNS specified salt for product acceptance by the Montana Department of Transportation. This method will serve as the reference method for salt with an insoluble residue of 0.0% – 10.0% by mass.

2 **Referenced Documents:**

2.1 **ASTM Standards:**
E 534 Standard Test Methods for Chemical Analysis of Sodium Chloride

2.2 **Other Standards:**

3 **Apparatus and Reagents:**

3.1 *Analytical Balance*

3.2 *Laboratory Desiccator*

3.3 *Laboratory Oven*

4 **Procedure**

4.1 Weigh 100g of salt to the nearest 0.01g (split or quartered from original sample) into a previously dried and weighed moisture dish or pan. Distribute the salt in the vessel such that it is not more than 1/4 of an inch in depth at any given location.

4.2 Dry at 110°C for 2 hours.

4.3 Cool in a desiccator and weigh

5 **Calculation and Reporting**

5.1 Calculate the percentage of moisture as follows:

\[ \text{moisture, mass} \% = \frac{(I - F)}{I} \times 100 \]

where:

\[ F = \text{final mass of the dry salt} \]
\[ I = \text{initial mass of the wet salt} \]

5.2 Report the insoluble residue to the nearest 0.01%

6 **Validation Data**

6.1 Validation data has not been established at this time. This method is an extension of ASTM E534, adapted for the PNS categories of salts.