5.1.39

AOAC Official Method 967.37
Phenothiazine in Feeds

Spectrophotometric Method

First Action 1967
Final Action 1970

A. Reagent

Phenothiazine standard solution.—Dissolve 10 mg recrystallized (from 10% solution in toluene) phenothiazine (Zeneca Ag Products) in 50 mL alcohol and dilute to 100 mL with alcohol. For working standards, dilute with equal volume of alcohol. (1 mL diluted solution = 50 μg phenothiazine.) Use freshly prepared solution; alcoholic solutions gradually develop rose tint within few h.

B. Determination

Place 1 g ground sample in 100 mL volumetric flask, add 50 mL alcohol, and heat on steam bath 15 min. Cool, dilute to volume with alcohol, mix, and let settle (ca 15 min) until supernate is clear.

Place 2 mL aliquot in 25 mL volumetric flask and add 10 mL alcohol. To flask add, in order given, 1 mL *1% alcoholic p-aminobenzoic acid solution*, 1 mL *aqueous 2% $NaNO_2$ solution*, and 1 mL HCl (1 + 3). Dilute to volume with alcohol. Read A of green solution at 600 nm in spectrophotometer against reagent blank. Determine amount of phenothiazine from standard curve.

$$\% \text{ Phenothiazine} = \mu g/200$$

Prepare standard curve, using 1, 2, and 3 mL dilute standard solution, as above.

References: JAOAC **41,** 338(1958); **42,** 254(1959).

CAS-92-84-2 (phenothiazine)