

KES

**Method of zinc Analysis
in Copper Alloys and
Copper Products**

KES T – M050

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1. Scope of application

This standard shall specify analysis method of zinc in copper products and copper alloys.

2. General particulars

General particulars of analysis method refer to KES T-M039 (General rules of analysis method of copper products and copper alloys)

3. Analysis methods

- (1) Titration method of ion exchange resin : This analysis method is applied to samples of 2 ~ 40 % of zinc contents by amount.
- (2) Analysis method of light absorption of atom: This analysis method is applied to samples of 0.01 ~ 1.0 % of zinc contents by amount.

4. Titration method of ion exchange resin

4.1 Summary

After separating nitric acid from a sample and extracting some amounts, dehydrate by adding sulfuric acid.

After cooling, dissolve by adding nitric acid and attach zinc to resin by getting through anodic ion exchange resin of strong base.

Then, after dissolving zinc by nitric acid, adding buffer solution and potassium cyanide into the solution and adding formalin with using EBT as reagent, titrate with EDTA standard solution.

4.2 Reagent

- (1) Hydrochloric acid (2N)
- (2) Nitric acid (1 : 1, 2 : 1, 0.1 N)
- (3) Sulfuric acid (1 : 1)
- (4) Buffer solution: made by dissolving ammonium chloride 70 g into ammonia water