



Method of Cobalt Analysis in Copper Products and Copper Alloys

KES T – M067

(EST)1988-12-14

Contents

1. Scope of Application
2. General Principles
3. Analysis Method



1. Scope of Application

This standard shall be applicable to cobalt analysis in copper products and copper alloys.

2. General Principles

The analysis method for general principles shall be in accordance with KES T-M309 (general principles for cobalt analysis in copper products and copper alloys).

3. Analysis Method

Cobalt in copper products and copper alloys is analyzed by absorption photometry.

3.1 Outline

Melting reagent with nitric acid and remove copper by electric decomposition. Apply acetic acid buffer solution and coloring with nitroso R salt solution. Measure absorption photometry near 515nm and make quantitative of cobalt.

3.2 Reagent

- (1) Nitric acid (1:1)
- (2) Hydrochloric acid (1:20)
- (3) Hydrochloric acid (1:100)
- (4) Sulfa acid (10%)
- (5) Nitroso R salt solution (0.75%): Not use of solution stored over 1week.
- (6) Acetic acid buffer solution : put 500g of acetic acid sodium($\text{CH}_3 \text{COONa} \cdot \text{H}_2 \text{O}$) in 600ml of water. After melting it, mix 30ml acetic acid and thin solution with water up to 1ℓ .
- (7) Cobalt standard solution(0.01 co/ml) : refer to KS M 0002