

1. Photometric determination of cobalt in magnetic alloys

By Shemeleva, G. G.; Kovalenko, P. N.

From *Sovrem. Metody Khim. Tekhnol. Kontr. Proizvod.* (1968), 136-7. Language: Russian, Database: CAPLUS

The Co-thiocyanate complex formed a ternary complex with *diantipyrylmethane* (I), which is readily sol. in CHCl₃. The ext. has a blue color. SO₄²⁻, PO₄³⁻, C₂O₄²⁻, and other anions did not interfere in the reaction. Fe³⁺, Cu²⁺, Ti⁴⁺ interfered, giving colored compds. with I. Ti was masked with NaF. Fe and Cu were reduced with Na₂S₂O₃ to Fe²⁺ and Cu⁺. The sensitivity of the reaction was 0.9 µg Co/ml, and the error of detn. was ≤2%.

~0 Citings

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2. Isolation and extraction-photometric determination of cobalt in nickel in the form of a ternary complex: cobalt-diantipyrylmethane-thiocyanate

By Adamiec, Izabella

From *Chemia Analityczna (Warsaw, Poland)* (1969), 14(1), 115-23. Language: Polish, Database: CAPLUS

Dissolve 1-5 g. Ni contg. 0.001-0.05% Co in 15 ml. 3:2 HNO₃ and evap. twice with 5 ml. concd. HCl. Add to the residue 5 ml. 5N H₂SO₄ and 10 ml. H₂O, bring to the boil, cool, add 10 ml. 10% ascorbic acid (to mask Fe(III) and Cu(II)), 5 ml. 40% NH₄SCN, and dil. to 50 ml. Ext. the soln. twice with 5 ml. 2% *diantipyrylmethane* in CHCl₃. Add to the combined exts. 2 ml. H₂SO₄ (d. 1.83), evap., and oxidize org. matter with HNO₃ (d. 1.4). Treat the residue with 3 ml. N HCl and 10 ml. H₂O and boil. After cooling add 3 ml. 50% NaOAc, 5 ml. 0.2% nitroso-R salt, and 5 ml. 1:1 HNO₃, and bring to the boil. After cooling measure the absorbance at 550 mµ. In the detn. of Co contents >0.05% (0.05-0.70%) measure directly the absorbance of the CHCl₃ ext. of the ternary complex at 620 mµ; molar absorptivity is 3.6 × 10³.

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