

A Study of Palladium Recovery with Thiourea from Nitric Acid Solutions

V. I. Tikhomirova, T. A. Desyatova, and V. A. Suvorova

Institute of Experimental Mineralogy, Russian Academy of Sciences, Chernogolovka, Moscow oblast, Russia

Received September 22, 2006

Abstract—Interaction in the system Pd(II)–HNO₃–SC(NH₂)₂ was studied. It was shown that the precipitates formed, which have various compositions and solubilities, contain palladium(II) and thiourea conversion products. Elemental, X-ray diffraction, and atomic-adsorption analyses and IR and electronic absorption spectroscopies were applied to demonstrate the possibility of virtually quantitative precipitation of palladium(II) under certain conditions in the form of a poorly soluble precipitate Pd₂(CN)₄ · H₂O.

DOI: 10.1134/S1070427207100059