

Simeonova Z., **Gavazov K.**, Alexandrov A., *Extraction studies in the system vanadium(V) – 4-(2-pyridylazo)resorcinol (PAR) – 2-(4-iodophenyl)-3-(4-nitrophenyl)-5-phenyl-tetrazolium chloride (INT) – water – chloroform*, **Журнал неорганической химии** **44**(4) (1999) 676-680; **Russ. J. Inorg. Chem.** **44**(4) (1999) 621-625.

A ternary ion-associate complex of vanadium(V) with 4-(2-pyridylazo) resorcinol (PAR) and 2-(4-iodophenyl)-3-(4-nitrophenyl)-5-phenyl-tetrazolium chloride (INT) was prepared. The complex is sparingly soluble in water but extracted into chloroform. The composition of the complex was determined to be V(V): PAR: INT = 1 : 1 : 1. Optimum extraction conditions were established – pH of the aqueous phase, concentration of reagents, and time of extraction. The following constants were determined: distribution coefficient D , recovery factor ($R = 97.5\%$), distribution constant ($K_D = 39.4 \pm 6.2$), extraction constant ($K_{ex} = (4.47 \pm 0.32) \times 10^4$), and equilibrium constant in aqueous medium ($\beta = (1.13 \pm 0.26) \times 10^3$). A small bathochromic effect was observed in the spectrum of the ion-associate complex. The molar absorptivity was obtained to be $\varepsilon = (3.9 \pm 0.1) \times 10^4 \text{ l mol}^{-1} \text{ cm}^{-1}$.