INVESTIGATION OF THE PD (II) ION'S SORPTION BY SYNTHETIC SORBENT CONTAINING 2 AMINO PHENOL 4-6 DISULFO ACID FRAQMENT

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At the present time synthetic and polymer sorbents are used mainly for the production of materials suitable for various industries. It is known that the sorption properties of synthetic polymer sorbents are higher than the sorbent properties of natural sorbents. Synthetic sorbents allow for the concentration and the determination of micro quantities of a number of metal ions by appropriate analysis methods. Like many other metals, synthetic polymer sorbents widely used also for determination of palladium (II) ion. For this goal copolymer of maleic anhydride and styrene was modified by formaldehyde and 2-amino phenol 4-6 disulfo acid fragmented amine to synthesize a new polymer sorbent [1]. The new synthesized polymer sorbent was characterized by IR-spectroscopy and calculated its sorption capacity. Sorption of palladium by synthetic copolymer of maleic anhydride and styrene containing 2 amino phenol 4-6 disulfo acid fragment was carried out in static condition. Sorption equilibrium with 2 amino phenol 4-6 disulfo acid fragmented polymer sorbents occurred within two hours. Optimal pH is 5 for this new sorbents. Effects of buffer solutions on the sorption process were studied and all researches were performed at optimum pH [1]. The effect of time on sorption of Pd (II) ions was studied and over the used synthetic sorbent within 2 hours a quantity analysis carried out in static conditions.The effect of various mineral acids on desorption process has been studied. As a result, at the 2M $HClO_4$ environment desorption of palladium ions observed with a higher output (93.84%). Ions of Pd (II) at pH 5 and acid medium interacting with 2,2, 3,4 tetrahydroxy sulfo chloride azo benzene reactant are formed a color complex .Dependence of optical density of colored complex solutions on pH and wavelength are given in the table below.

The main indications of Pd (II) ions
with 2 amino phenol 4-6 disulphonic acid fragmented sorbents.

Optimal sorption, pH-1	Establishment of equilibrium, hour	Ion force, mol/l	Maximum sorption capacity, mq/q	Optimal acid
5	1.5-2	0.8	491	$HClO_4$

This method is used for the determination and concentrating of micro quantities of palladium ions in various natural and industrial facilities.

1. Sizin H.I., Zolotov Y.A. Flow sorption-spectroscopic methods of analysis // Journal analytical chemistry. 2002. V. 57, № 7. P. 678.