MODIFIED ELECTRODES ON BASIS OF ELEMENTS OF GROUP IV FOR ANALYTICAL ENVIRONMENTAL OBJECTS CONTROL

Zhanna Ryscaliyeva, Zaripa Kunasheva, Gulmira Bekturganova, Manshuk Khabdulhalikova

West Kazakhstan Agrarian and Technical University, Republic of Kazakhstan, Uralsk
gulmirabekt@inbox.ru

The list of substances polluted the environment because of intensive development of oil and gas deposits of West Kazakhstan is growing fast. It stimulate the process of searching and working out of more reliable and express methods of environmental objects control. For this purpose the electrodes with modified surface on basis of tin, lead and tin-lead alloy were investigated. The method of potentiometric determination of sulfate ions in deposit water with use of these electrodes was developed. The reliability of determination of sulfate ions in the deposit water was confirmed by the gravimeter method, and in gryphon zone water – by the turbidity method. The results of potentiometric titration of sulfates in deposit water obtained with use of modified electrodes show that the precision of the method is close to that of the control method. The titration methods with use of the lead electrodes demonstrate the wide possibilities and different approaches to the solution of concrete analytical tasks. One of the most important advantages of the method is its comparative cheapness and accessibility of electrode materials.