Automation of Process of Measuring and Control of Technological Water

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For determination of fluoride in the different objects of environment and technological solutions the greatest interest presents by itself a crystalline hard membrane electrode, the features of that are a small inertance, protracted term of work, chemical stability in relation to many acids and lyes, Nernst character of dependence of electrode function, that is kept in the interval of a few orders of change of activity of fluoride, absence of influence of oxidants and repairers that are in solutions.

For measuring and control of quality of technological water as measuring of difference of potentials used ionomer universal. For continuous pumping of solutions and reagents used the electromagnetic pump of type «Lemon». A crystalline membrane from fluoride of lanthanum was used as a pickoff of detector from the fluoride electrode. Chlorine-selective electrodes were made a laboratory method [Patent UA № 3914]. Blocks of analyzer – metering faucet-device, analytical module, reactor, detector are made in laboratory terms and have the again worked out constructions. For more sensible and selective determination of fluoride there was the conducted optimization of choice of composition of buffer solution in technological water [Request UA in 2014 № 10224].

For verification of work of flow-injection ionometric of the informatively-measuring system and measuring methodology approbation of work is conducted on determination of fluoride in the next sources of his possible presence: plumbing and boiled tap water, Cherkasy; water is well-decked, Great Kanivtsi; mineral fertilizer for room plants «Vita»; mining hole water of trolleybus management, Cherkasy; liquid complex fertilizer, producer of cotton WOOLS «Nitrogen», Cherkasy; tooth-pastes of home and foreign production; mining hole and well water, Tuboltsu; salt water, estuary Kyjalnik, Odessa; rain-water, Cherkasy; sewer water of «Azot», thundershower sewage system, 20 well and 20 chamber.