supplementary material

Rapid Evaluation of Integral Quality and Safety of Surface and Waste Waters by a Multisensor System (Electronic Tongue)

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Table S1. Composition of the sensor array.

Sensor name	Membrane active compounds	Plasticizer	Reference
S1	Tridodecylmethylammonium nitrate	NPOE	[S1]
S2	Carbonate ionophore I, tetradodecylammonium bromide	NPOE	[S1]
S3	Mn(III) tetraphenylporphirine chloride	NPOE	[S1]
S4	Polycrystalline AgS-AgCl	-	
S5	Sulfate ionophore I, tridodecylmethylammonium nitrate	NPOE	[S1]
S6	Mn(III) tetraphenylporphirine chloride, tetradodecylammonium bromide	NPOE	[S2]
S7	Tetradodecylammonium bromide	NPOE	[S2]
S8	Trimethyldodecylammonium nitrate	NPOE	[S2]
S9	Ammonium ionophore I, potassium tetrakis(4-chlorophenyl)borate	DOS	[S1]
S10	*N,N'*-Diheptyl-*N,N'*-dimethyl-1,4-butanediamide	NPOE	[S1]
S11	Trioctylphosphine oxide, potassium tetrakis(4-chlorophenyl)borate	DOS	[S3]
S12	Chlorinated cobalt dicarbollide	DOS	[S3]
S13	Potassium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate	DOS	[S3]
S14	Carbamoylmethylenphosphine oxide, chlorinated cobalt dicarbollide	NPOE	[S3]
S15	Tetraoctyldiglycol amide, chlorinated cobalt dicarbollide	NPOE	[S4]
S16	2,2'-Dipyridyl-6,6'-dicarboxylic acid diamide	NPOE	[S5]
S17	Tetrabutyl diamide of dipicolinic acid	NPOE	[S6]
S18	Fe selective chalcogenide glass sensor	-	[S7]

S19	Cd selective chalcogenide glass sensor	-	[S7]
S20	Hg selective chalcogenide glass sensor	-	[S7]

S1. https://www.sigmaaldrich.com/analytical-chromatography/analytical-products.html?TablePage=8670952

S2. Kirsanov, D.O., Legin, A.V., Kulikova, A.P., Pol'shin, E.N., Vlasov, Yu.G. Polymeric sensors for determination of anions of organic acids (2007) Russian Journal of Applied Chemistry, 80 (5), pp. 799-804. DOI: 10.1134/S1070427207050205

S3. A.V. Legin, D.O. Kirsanov, V.A. Babain, A.V. Borovoy, R.S. Herbst, Cross-sensitive rare-earth metal sensors based on bidentate neutral organophosphorus compounds and chlorinated cobalt dicarbollide, Analytica Chimica Acta 572 (2) (2006) 243-247. DOI: 10.1016/j.aca.2006.03.115

S4. A.V. Legin, V.A. Babain, D.O. Kirsanov, O.V. Mednova, Cross-sensitive rare earth metal ion sensors based on extraction systems, Sensors and Actuators, B: Chemical 131 (1) (2008) 29-36. DOI: 10.1016/j.snb.2007.12.002

S5. M. Alyapyshev, V. Babain, N. Borisova, I. Eliseev, D. Kirsanov, A. Kostin, A. Legin, M. Reshetova, Z. Smirnova, 2,2′-Dipyridyl-6,6′-dicarboxylic acid diamides: Synthesis, complexation and extraction properties, Polyhedron 29 (8) (2010) 1998-2005.DOI: 10.1016/j.poly.2010.03.021

S6. D.O. Kirsanov, O.V. Mednova, E.N. Pol'Shin, A.V. Legin, M.Yu. Alyapyshev, I.I. Eliseev, V.A. Babain, Yu.G. Vlasov, New polymeric chemical sensors for determination of lead ions, Russian Journal of Applied Chemistry 82 (2) (2009) 247-254. DOI: 10.1134/S1070427209020165

S7. Yu.G. Vlasov, E. Bychkov, Ion-selective chalcogenide glass electrodes, Ion-Selective Electrode Reviews 9(1) (1987) 5-91.

Figure S1. Image of the observed sensor fouling after one week of continuous measurements.

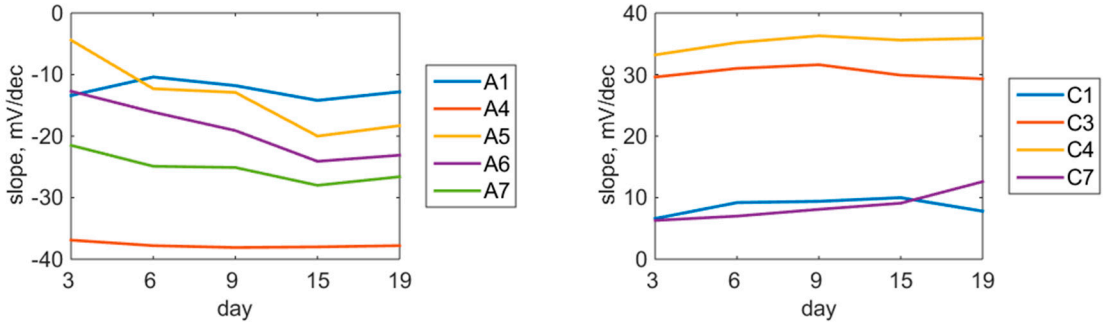

Figure S2. Evolution of the sensor sensitivities towards chloride (left) and sodium (right) ions. The slope values are calculated for the concentration range 10^{-4} – 10^{-2} M of NaCl.