Table 10: Sr^{2+}-Selective Electrodes

ionophore	membrane composition	$\lg K_{Sr^{2+},B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Sr^{2+}-1	0.2–0.5g Sr·Igepal CO-880·2B(C_6H_5)$_4$ in 5 mL 4-ethylnitrobenzene (Igepal CO-880: nonylphenoxy-poly(ethyleneoxy)ethanol)	Li^+, –2.7; Na^+, –2.7; K^+, –2.1; Cs^+, +2.3; NH_4^+, –2.7; H^+, –3.3; Mg^{2+}, –3.2; Ca^{2+}, –2.7; Al^{3+}, –2.7; Ba^{2+}, +2.5; Mn^{2+}, –3.2; Fe^{2+}, –3.1; Fe^{3+}, –2.4; Co^{2+}, –3.1; Ni^+, –3.0; Zn^{2+}, –2.7; $(CH_3)_4N^+$, >3.0;	SSM	0.1	0.1	27	$>10^{-5}$	23 °C; 4 < pH < 10	[1]
		Ca^{2+}, –2.1		0.01	0.01				
		Ca^{2+}, –1.3		0.001	0.001				
		Ca^{2+}, –0.5		0.0001	0.0001				
Sr^{2+}-2	strontium doped poly(dibenzo-18-crown-6) film electrode	Li^+, –2.38; Na^+, –2.57; K^+, –2.96; Rb^+, –2.33; Cs^+, –2.49; NH_4^+, –1.63; Mg^{2+}, –2.64; Ca^{2+}, –2.99; Ba^{2+}, –0.32	SSM	0.01	0.01	59	10^{-5}–10^{-1}	25 ± 0.5 °C; t_{resp} = 25–30 s; $c_{dl} = 2.9 \times 10^{-5}$ M; 3.0 < pH < 7.0; τ = 60 d	[2]
Sr^{2+}-3	**Sr^{2+}-3** (w =1.5 %), oNPOE (w =65 %), KTpClPB (x_i =21 %), PVC (w =33 %)	Mg^{2+}, –0.57; Ca^{2+}, –0.57	MPM		Mg^{2+}, 0.05, 0.1; Ca^{2+}, 0.005, 0.1	–		140 mM NaCl background	[3]
Sr^{2+}-4	**Sr^{2+}-4** (w =1.5 %), oNPOE (w =65 %), KTpClPB (x_i =23 %), PVC (w =33 %)	Mg^{2+}, –1.07; Ca^{2+}, –0.80	MPM		Mg^{2+}, 0.05, 0.1; Ca^{2+}, 0.005, 0.1	–		140 mM NaCl background	[3]
Sr^{2+}-5	**Sr^{2+}-5** (w =1.5 %), oNPOE (w =65 %), KTpClPB (x_i =24 %), PVC (w =33 %)	Mg^{2+}, –1.24; Ca^{2+}, –0.70	MPM		Mg^{2+}, 0.05, 0.1; Ca^{2+}, 0.005, 0.1	–		140 mM NaCl background	[3]
Sr^{2+}-6	**Sr^{2+}-6** (w =1.5 %), oNPOE (w =65 %), KTpClPB (x_i =27 %), PVC (w =33 %)	Mg^{2+}, –2.43; Ca^{2+}, –2.00	MPM		Mg^{2+}, 0.05, 0.1; Ca^{2+}, 0.005, 0.1	–		140 mM NaCl background	[3]
Sr^{2+}-7	**Sr^{2+}-7** (w =1.5 %), oNPOE (w =65 %), KTpClPB (x_i =30 %), PVC (w =33 %)	Mg^{2+}, –2.51; Ca^{2+}, –2.00	MPM		Mg^{2+}, 0.05, 0.1; Ca^{2+}, 0.005, 0.1	–		140 mM NaCl background	[3]
Sr^{2+}-8	**Sr^{2+}-8** (w =1.5 %), oNPOE (w =65 %),	Mg^{2+}, –2.80; Ca^{2+}, –1.82	MPM		Mg^{2+}, 0.05, 0.1;	–		140 mM NaCl background	[3]

Table 10: Sr^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Sr^{2+},B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	KTpClPB (x_i =33 %), PVC (w =33 %)				Ca^{2+}, 0.005, 0.1				

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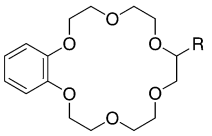
(2) N. Akmal, H. Zimmer, H.B. Mark, *Anal. Lett.*, **24**, 1431–1443 (1991).
(3) A.S. Attiyat, G.D. Christian, C.V. Cason, R.A. Bartsch, *Electroanalysis*, **4**, 51–56 (1992).



Sr^{2+}-3 (M_r = 312.36): R = H
Sr^{2+}-4 (M_r = 342.39): R = CH_2OH
Sr^{2+}-5 (M_r = 356.41): R = CH_2OCH_3
Sr^{2+}-6 (M_r = 400.47): R = $CH_2OCH_2CH_2OCH_3$
Sr^{2+}-7 (M_r = 444.47): R = $CH_2O(CH_2CH_2O)_2CH_3$
Sr^{2+}-8 (M_r = 488.47): R = $CH_2O(CH_2CH_2O)_3CH_3$