Table 8: Mg^{2+}-Selective Electrodes

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-1	**Mg^{2+}-1** (w = 1–2 %), oNPOE (w = 65–66 %), PVC (w = 33 %)	Li^+, +0.5; Na^+, +0.3; K^+, +0.3; Rb^+, –0.8; Cs^+, –0.1; NH_4^+, +0.6; Ca^{2+}, +1.7; Sr^{2+}, +0.4; Ba^{2+}, +0.7	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
	Mg^{2+}-1 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 100 %), PVC (w = 33 %)	Li^+, +0.2; Na^+, –0.1; K^+, +0.1; Rb^+, –0.7; Cs^+, 0.0; NH_4^+, +0.6; Ca^{2+}, +3.2; Sr^{2+}, +1.5; Ba^{2+}, +1.8	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-2	**Mg^{2+}-2** (w = 1–2 %), oNPOE (w = 65–66 %), PVC (w = 33 %)	Li^+, +0.8; Na^+, +0.6; K^+, +0.6; Rb^+, –1.0; Cs^+, 0.0; NH_4^+, +1.1; Ca^{2+}, +0.9; Sr^{2+}, +1.4; Ba^{2+}, +2.0	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
	Mg^{2+}-2 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 100 %), PVC (w = 33 %)	Li^+, +0.6; Na^+, –0.1; K^+, –1.2; Rb^+, –1.5; Cs^+, –1.6; NH_4^+, –0.2; Ca^{2+}, +2.1; Sr^{2+}, +0.5; Ba^{2+}, –0.1	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-3	**Mg^{2+}-3** (w = 1–2 %), oNPOE (w = 65–66 %), PVC (w = 33 %)	Li^+, +0.4; Na^+, +0.4; K^+, +0.6; Rb^+, –1.5; Cs^+, +0.9; NH_4^+, +1.2; Ca^{2+}, –0.2; Sr^{2+}, 0.0; Ba^{2+}, +0.4	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
	Mg^{2+}-3 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 100 %), PVC (w = 33 %)	Li^+, +0.2; Na^+, +0.3; K^+, +2.1; Rb^+, +3.0; Cs^+, +4.3; NH_4^+, +2.2; Ca^{2+}, +0.0; Sr^{2+}, +0.1; Ba^{2+}, +0.5	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-4	**Mg^{2+}-4** (w = 1–2 %), oNPOE (w = 65–66 %), PVC (w = 33 %)	Li^+, +0.4; Na^+, +0.4; K^+, +1.1; Rb^+, +0.3; Cs^+, +0.9; NH_4^+, +1.0; Ca^{2+}, +0.4; Sr^{2+}, +0.3; Ba^{2+}, +0.5	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
	Mg^{2+}-4 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 100 %), PVC (w = 33 %)	Li^+, –0.7; Na^+, +0.2; K^+, +2.9; Rb^+, +3.6; Cs^+, +4.5; NH_4^+, +2.3; Ca^{2+}, +2.8; Sr^{2+}, +2.6; Ba^{2+}, +3.0	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-5	**Mg^{2+}-5** (w = 1–2 %), oNPOE (w = 65–66 %), PVC (w = 33 %)	Li^+, +0.7; Na^+, –0.4; K^+, +1.3; Rb^+, +0.4; Cs^+, +1.5; NH_4^+, +1.4; Ca^{2+}, +0.4; Sr^{2+}, +0.3; Ba^{2+}, +0.5	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
	Mg^{2+}-5 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 100 %), PVC (w = 33 %)	Li^+, –0.2; Na^+, +0.8; K^+, +3.8 ; Rb^+, +4.8; Cs^+, +5.5; NH_4^+, +2.9; Ca^{2+}, +3.6; Sr^{2+}, +1.6; Ba^{2+}, +2.4	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-6	**Mg^{2+}-6** (w = 1–2 %), oNPOE (w = 65–66 %),	Li^+, +1.9; Na^+, +2.0; K^+, +1.9; Rb^+, +2.0; Cs^+, +2.1; NH_4^+, +1.8;	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	PVC (w = 33 %)	Ca^{2+}, +3.4; Sr^{2+}, +2.2; Ba^{2+}, +0.2							
	Mg^{2+}-6 (w = 1–2 %), oNPOE (w = 65–66 %), KTpClPB (x_i = 50 %), PVC (w = 33 %)	Li^+, +2.5; Na^+, +2.1; K^+, +1.9; Rb^+, +2.6; Cs^+, +2.1; NH_4^+, +1.8; Ca^{2+}, +3.9; Sr^{2+}, +2.7; Ba^{2+}, +0.5	SSM	0.1	0.1	–	–	20–22 °C; r.o.o.g.	[1]
Mg^{2+}-7	**Mg^{2+}-7** (w = 1.7 %), TEHP (w = 31.8 %), 5-phenyl-1-pentanol (w = 31.8 %), PVC (w = 34.7 %)	Li^+, +0.2; Na^+, –1.1; K^+, –1.5; Rb^+, –1.7; Cs^+, –1.6; NH_4^+, +0.2; Ca^{2+}, +1.5; Sr^{2+}, –1.0; Ba^{2+}, –2.0; H^+, +3.8	SSM	0.1	0.1	–	9 × 10^{-4} – 10^{-1}	22 ± 0.5 °C; pH = 8.40 (internal solution)	[2]
		Li^+, +1.3; Na^+, –0.3; K^+, –0.8; Rb^+, –1.0; Cs^+, –0.9; NH_4^+, +1.1; Ca^{2+}, +0.9; Sr^{2+}, –1.6; Ba^{2+}, –2.0; H^+, +4.9	SSM	0.1	0.1	N	–	pH = 8.80 (internal solution); r.o.o.g.	
	Mg^{2+}-7 (w = 12 %), DBE (w = 60 %), KTpClPB (x_i = 4 %), PVC (w = 27 %)	Li^+, –1.2; Na^+, –1.1; K^+, –0.6; Rb^+, +0.1; Cs^+, +1.1; NH_4^+, +0.4; Ca^{2+}, –0.2; Sr^{2+}, –1.1; Ba^{2+}, –0.7	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3)	[3]
Mg^{2+}-8	**Mg^{2+}-8** (w = 1.7 %), TEHP (w = 31.8 %), 5-phenyl-1-pentanol (w = 31.8 %), PVC (w = 34.7 %)	Li^+, +0.2; Na^+, –1.1; K^+, –1.5; Rb^+, –1.7; Cs^+, –1.6; NH_4^+, +0.5; Ca^{2+}, +1.2; Sr^{2+}, –1.1; Ba^{2+}, –2.1; H^+, +3.8	SSM	0.1	0.1	–	–	22 ± 0.5 °C; pH = 8.40 (internal solution)	[2]
		Li^+, +0.6; Na^+, –1.0; K^+, –1.6; Rb^+, –2.0; Cs^+, –2.0; NH_4^+, +0.3; Ca^{2+}, +2.0; Sr^{2+}, –1.0; Ba^{2+}, –2.3; H^+, +3.0	SSM	0.1	0.1	N	–	pH = 8.80 (internal solution); r.o.o.g.	
Mg^{2+}-9	**Mg^{2+}-9** (w = 1.7 %), TEHP (w = 31.8 %), 5-phenyl-1-pentanol (w = 31.8 %), PVC (w = 34.7 %)	Li^+, +0.2; Na^+, –1.2; K^+, –1.5; Rb^+, –1.8; Cs^+, –1.7; NH_4^+, +0.6; Ca^{2+}, +1.0; Sr^{2+}, –1.0; Ba^{2+}, –2.0; H^+, +3.9	SSM	0.1	0.1	–	–	22 ± 0.5 °C; pH = 8.40 (internal solution)	[2]
		Li^+, +0.4; Na^+, –1.1; K^+, –1.4; Rb^+, –1.7; Cs^+, –1.6; NH_4^+, +0.5; Ca^{2+}, +1.2; Sr^{2+}, –1.0; Ba^{2+}, –1.7; H^+, +4.1	SSM	0.1	0.1	N	–	pH = 8.80 (internal solution) r.o.o.g.	
Mg^{2+}-10	**Mg^{2+}-10** (w = 1.7 %), TEHP (w = 31.8 %), 5-phenyl-1-pentanol (w = 31.8 %),	Li^+, +4.1; Na^+, +2.4; K^+, +2.0; Rb^+, +1.9; Cs^+, +2.1; NH_4^+, +4.1; Ca^{2+}, +0.3; Sr^{2+}, –0.3; Ba^{2+}, –0.1;	SSM	0.1	0.1	–	–	22 ± 0.5 °C; pH = 8.40 (internal solution)	[2]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	PVC (w = 34.7 %)	Li^+, +1.9; Na^+, +0.2; K^+, –0.6; Rb^+, –0.8; Cs^+, –0.9; NH_4^+, +1.6; Ca^{2+}, +1.8; Sr^{2+}, –0.8; Ba^{2+}, –1.4; H^+, 5.0	SSM	0.1	0.1	28.5 ± 0.9	5 × 10^{-4} – 10^{-1}	pH = 8.80 (internal solution); r.o.o.g.	
Mg^{2+}-11	**Mg^{2+}-11** (w = 1–2 %), KTpClPB (x_i = 50 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –0.9; Na^+, –2.3; K^+, –1.2; Rb^+, –0.6; Cs^+, +0.3; H^+, +6.5; Ca^{2+}, +1.5; Sr^{2+}, +0.3; Ba^{2+}, +0.3	SSM	0.1	0.1	–	–		[4]
	Mg^{2+}-11, propylene carbonate, NaTPB (weight ratio not reported)	Li^+, +0.1; Na^+, –1.1; K^+, –1.4; Cs^+, –0.9; $AcCh^+$, –0.1; NH_4^+, –0.1; Ca^{2+}, +1.1; Sr^{2+}, +0.6; Ba^{2+}, +0.7; H^+, 2.7	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
Mg^{2+}-12	**Mg^{2+}-12** (w = 1 %), oNPOE (w = 66 %), PVC (w = 33 %)	Li^+, +0.5; Na^+, +0.5; K^+, +0.6; Rb^+, +0.4; Cs^+, +0.6; NH_4^+, +0.3; Ca^{2+}, +0.1; Sr^{2+}, –0.1; Ba^{2+}, –0.1	SSM	0.1	0.1	–	–	pH = 8.8 (0.01 M tris/HCl); r.o.o.g.	[4], [6]
	Mg^{2+}-12 (w = 1 %), KTpClPB (x_i = 50 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –1.5; Na^+, –1.5; K^+, –1.4; Rb^+, –1.0; Cs^+, –1.2; NH_4^+, –1.2; Ca^{2+}, –0.1; Sr^{2+}, –1.2; Ba^{2+}, –1.7	SSM	0.1	0.1	–	–	pH = 8.8 (0.01 M tris/HCl); r.o.o.g.	[4], [6]
	Mg^{2+}-12 (w = 1 %), KTpClPB (x_i = 73 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.6; Na^+, –2.6; K^+, –2.3; Rb^+, –2.0; Cs^+, –1.3; NH_4^+, –2.3; Ca^{2+}, –2.5; Sr^{2+}, –3.2; Ba^{2+}, –3.1; H^+, 10.8	SSM	0.1	0.1	32 ± 1	10^{-3} – 10^{-1}	pH = 8.8 (0.01 M tris/HCl)	[4], [6]
	Mg^{2+}-12 (w = 1 %), KTpClPB (x_i = 79 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.7; Na^+, –2.7; K^+, –2.2; Rb^+, –2.0; Cs^+, –1.2; NH_4^+, –2.4; Ca^{2+}, –2.7; Sr^{2+}, –3.4; Ba^{2+}, –3.2	SSM	0.1	0.1	–	–	pH = 8.8 (0.01 M tris/HCl); r.o.o.g.	[4], [6]
	Mg^{2+}-12 (w = 1 %), KTpClPB (x_i = 88 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.6; Na^+, –2.5; K^+, –1.2; Rb^+, –0.3; Cs^+, +1.0; NH_4^+, –1.6; Ca^{2+}, –2.2; Sr^{2+}, –2.9; Ba^{2+}, –2.7	SSM	0.1	0.1	–	–	pH = 8.8 (0.01 M tris/HCl); r.o.o.g.	[4], [6]
	Mg^{2+}-12 (w = 1 %), KTpClPB (x_i = 120 %), oNPOE (w = 64 %), PVC (w = 33 %)	Li^+, –0.4; Na^+, +1.1; K^+, +4.8; Rb^+, +6.1; Cs^+, +7.2; NH_4^+, +3.4; Ca^{2+}, +0.3; Sr^{2+}, +0.1; Ba^{2+}, +0.7	SSM	0.1	0.1	–	–	pH = 8.8 (0.01 M tris/HCl); r.o.o.g.	[4], [6]
Mg^{2+}-13	**Mg^{2+}-13** (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 70 %), PVC (w = 33 %)	Li^+, –2.3 Na^+, –2.6; K^+, –2.3; Rb^+, –1.8; Ca^{2+}, +0.9; Sr^{2+}, +0.5; Ba^{2+}, +0.5; H^+, +2.6	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-14	**Mg^{2+}-14** (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 70 %), PVC (w = 33 %)	Li^+, –3.3 Na^+, –3.6; K^+, –3.7; Rb^+, –2.8; Ca^{2+}, –0.1; Sr^{2+}, –0.6; Ba^{2+}, –0.6; H^+, +2.3	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
Mg^{2+}-15	**Mg^{2+}-15** (w = 1 %), CP (w = 66 %), PVC (w = 33 %)	Li^+, +0.7; Na^+, +0.8; K^+, +1.1; Rb^+, +1.8; Ca^{2+}, +0.2; Sr^{2+}, +0.1; Ba^{2+}, +0.3; H^+, +2.1	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 40 %), PVC (w = 33 %)	Li^+, –3.0; Na^+, –3.7; K^+, –3.6; Rb^+, –2.7; Ca^{2+}, +0.1; Sr^{2+}, –0.6; Ba^{2+}, –0.6; H^+, +1.5	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 70 %), PVC (w = 33 %)	Li^+, –3.1; Na^+, –3.8; K^+, –3.7; Rb^+, –2.6; Ca^{2+}, 0.0; Sr^{2+}, –0.7; Ba^{2+}, –0.7; H^+, +1.7	SSM	0.1	0.1	28.0	10^{-3} –10^{-1}	21 ± 1 °C; r.o.o.g.; t_{95} = 0.9 s;	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 80 %), PVC (w = 33 %)	Li^+, –3.3; Na^+, –3.7; K^+, –3.7; Rb^+, –2.6; Ca^{2+}, –0.3; Sr^{2+}, –0.8; Ba^{2+}, –0.8; H^+, +1.8	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 120 %), PVC (w = 33 %)	Li^+, –3.2; Na^+, –3.4; K^+, –3.1; Rb^+, –2.6; Ca^{2+}, –0.8; Sr^{2+}, –1.5; Ba^{2+}, –1.5; H^+, +2.4	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 64 %), KTpClPB (x_i = 158 %), PVC (w = 33 %)	Li^+, –0.4; Na^+, –0.7; K^+, +0.6; Rb^+, +1.8; Ca^{2+}, –0.3; Sr^{2+}, –0.9; Ba^{2+}, –0.6; H^+, +2.2	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), PVC (w = 33 %), KTpClPB (x_i = 70 %), tetraundecyl benzhydrol 3,3',4,4'-tetracarboxylate (w = 65 %)	Na^+, –0.4; K^+, +0.7; Ca^{2+}, +0.6	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), KTpClPB (x_i = 70 %), oNPPE (w = 65 %), PVC (w = 33 %)	Na^+, –3.6; K^+, –2.3; Ca^{2+}, –0.2	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), KTpClPB (x_i = 70 %), phenylpentanol (w = 32.5 %), oNPOE (w = 32.5 %), PVC (w = 33 %)	Na^+, –3.0; K^+, –2.8; Ca^{2+}, +0.4	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), KTpClPB (x_i = 70 %), phenylpentanol (w = 32.5 %), BEHP (w = 32.5 %), PVC (w = 33 %)	Na^+, +0.3; K^+, +0.7; Ca^{2+}, +0.5	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$lgK_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Mg^{2+}-15 (w = 1 %), KTpClPB (x_i = 70 %), pNP (w = 65 %), PVC (w = 33 %)	Na^+, +3.5; K^+, +4.8; Ca^{2+}, +0.5	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
	Mg^{2+}-15 (w = 1 %), CP (w = 32.5 %), KTpClPB (x_i = 70 %), oNPOE (w = 32.5 %), PVC (w = 33 %)	Na^+, –3.8; Ca^{2+}, 0.0	–	–	–	–	–	21 ± 1 °C	[8]
	Mg^{2+}-15 (w = 1 %), KTpClPB (x_i = 70 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.5; Na^+, –3.0; K^+, –0.8; Ca^{2+}, –0.2; Sr^{2+}, –0.7; H^+, +2.2	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[9]
Mg^{2+}-16	**Mg^{2+}-16** (w = 1 %), CP (w = 65 %), KTpClPB (x_i = 70 %), PVC (w = 33 %)	Li^+, –3.1; Na^+, –3.5; K^+, –3.8; Rb^+, –2.9; Ca^{2+}, –0.1; Sr^{2+}, –0.7; Ba^{2+}, –0.6; H^+, +2.1	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[7]
Mg^{2+}-17	**Mg^{2+}-17** (w = 10 %), oNPOE (w = 89 %), KTpClPB (x_i = 11 %)	Na^+, –2.0; K^+, –2.2; $AcCh^+$, –0.6; Ca^{2+}, +1.0	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
	Mg^{2+}-17 (w = 10 %), oNPOE (w = 88 %), KTpClPB (x_i = 23 %)	Na^+, –2.2; K^+, –2.3; $AcCh^+$, –0.4; Ca^{2+}, +1.0	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
	Mg^{2+}-17 (w = 10 %), oNPOE (w = 87 %), KTpClPB (x_i = 34 %)	Li^+, –1.2; Na^+, –2.2; K^+, –2.3; Cs^+, –2.0; NH_4^+, –1.8; $AcCh^+$, –0.2; Ca^{2+}, +0.9; Sr^{2+}, +0.6; Ba^{2+}, +0.8; H^+, +1.5	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec. $t_{90} \leq 3$ s; $\tau > 7$ d; r.o.o.g.	[5], [10]
	Mg^{2+}-17 (w = 10 %), oNPOE (w = 86 %), KTpClPB (x_i = 46 %)	Na^+, –2.3; K^+, –2.4; $AcCh^+$, +0.4; Ca^{2+}, +0.6	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
	Mg^{2+}-17 (w = 10 %), PC (w = 87 %), KTpClPB (x_i = 34 %)	Na^+, –1.7; K^+, –1.7; $AcCh^+$, –0.8; Ca^{2+}, +0.9	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
	Mg^{2+}-17 (w = 10 %), 2,3-DMNB (w = 87 %), KTpClPB (x_i = 46 %)	Na^+, –2.2; K^+, –1.9; $AcCh^+$, +1.3; Ca^{2+}, +0.8	SSM	0.1	0.1	–	–	22 ± 1 °C; microelec.	[5]
	Mg^{2+}-17 (w = ? %), oNPOE (w = ? %), KTpClPB (x_i = 70 %)	Li^+, –1.3; Na^+, –2.2; K^+, –2.3; NH_4^+, –1.8; $AcCh^+$, –0.2; Ca^{2+}, +0.8; Sr^{2+}, +0.5; Ba^{2+}, +0.7; H^+, +1.5	SSM	0.1	0.1	–	–	21.5 ± 1 °C; microelec.; r.o.o.g.	[11]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-18	**Mg^{2+}-18** (w = 12 %), KTpClPB (x_i = 3 %), PVC (w = 27 %)	Li^+, –2.8; Na^+, –2.7; K^+, –1.9; Rb^+, –1.3; Cs^+, –0.3; NH_4^+, –0.9; Ca^{2+}, –2.2; Sr^{2+}, –2.9; Ba^{2+}, –3.0	SSM	0.1	0.1	60	10^{-4} – 2 $\times 10^{-2}$	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-19	**Mg^{2+}-19** (w = 12 %), KTpClPB (x_i = 3 %), DBE (w = 60 %), PVC (w = 27 %)	Li^+, –0.6; Na^+, –0.8; K^+, –0.4; Rb^+, +0.2; Cs^+, +1.3; NH_4^+, +0.4; Ca^{2+}, –0.4; Sr^{2+}, –0.9; Ba^{2+}, –1.3	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-20	**Mg^{2+}-20** (w = 12 %), KTpClPB (x_i = 3 %), DBE (w = 60 %), PVC (w = 27 %)	Li^+, –1.0; Na^+, –1.3; K^+, –0.8; Rb^+, –0.2; Cs^+, +0.8; NH_4^+, +0.1; Ca^{2+}, –1.6; Sr^{2+}, –2.1; Ba^{2+}, –2.2	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-21	**Mg^{2+}-21** (w = 12 %), KTpClPB (x_i = 5 %), DBE (w = 60 %), PVC (w = 27 %)	Li^+, +0.6; Na^+, +0.2; K^+, +0.9; Rb^+, +1.5; Cs^+, +2.3; NH_4^+, +1.5; Ca^{2+}, –0.5; Sr^{2+}, –0.8; Ba^{2+}, –0.9	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-22	**Mg^{2+}-22** (w = 12 %), KTpClPB (x_i = 3 %), DBE (w = 60 %), PVC (w = 27 %)	Na^+, +0.5; K^+, +1.1; Cs^+, +2.7; Ca^{2+}, +0.4	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-23	**Mg^{2+}-23** (w = 12 %), KTpClPB (x_i = 3 %), DBE (w = 60 %), PVC (w = 27 %)	Na^+, +1.2; K^+, +1.6; Cs^+, +2.1; Ca^{2+}, +0.8	SSM	0.1	0.1	–	–	25 ± 0.5 °C; pH = 10.0 (0.05M tris/HNO_3); r.o.o.g.	[3]
Mg^{2+}-24	**Mg^{2+}-24** (w = 1 %), CP (w = 32.5 %), KTpClPB (x_i = 70 %), oNPPE (w = 32.5 %), PVC (w = 33 %)	Li^+, –1.9; Na^+, –3.0; K^+, –2.2; Ca^{2+}, –0.2; H^+, +1.5	SSM	0.1	0.1	–	–	37 °C	[12]
Mg^{2+}-25	**Mg^{2+}-25** (w = 1 %), oNPOE (w = 66 %), PVC (w = 33 %)	Li^+, +1.2; Na^+, +0.8; K^+, +1.8; Rb^+, +1.8; NH_4^+, +1.8; Ca^{2+}, +0.8; Ba^{2+}, +0.9; H^+, +4.6	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[6], [13]
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 40 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –1.8; Na^+, –2.5; K^+, –2.3; Rb^+, –2.2; NH_4^+, –2.2; Ca^{2+}, +0.8; Ba^{2+}, +1.0; H^+, +1.8	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[6], [13]
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 70 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.2; Na^+, –2.8; K^+, –2.5; Rb^+, –2.3; NH_4^+, –2.4; Ca^{2+}, +0.6; Ba^{2+}, +0.8; H^+, +1.3	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[6], [13]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 90 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.8; Na^+, –3.1; K^+, –2.5; Rb^+, –2.1; NH_4^+, –2.8; Ca^{2+}, –0.2; Ba^{2+}, –0.6; H^+, +1.2	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[6], [13]
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 120 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –4.0; Na^+, –4.1; K^+, –2.8; Rb^+, –1.9; NH_4^+, –3.2; Ca^{2+}, –0.8; Ba^{2+}, –1.6; H^+, +0.9	SSM	0.1	0.1	–	–	21 ± 1 °C; r.o.o.g.	[6], [13]
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 150 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.8; Na^+, –3.8; K^+, –2.6; Rb^+, –1.8; NH_4^+, –2.8; Ca^{2+}, –0.8; Ba^{2+}, –1.7; H^+, +1.0	SSM	0.1	0.1	29.3	9.7×10^{-6} – 4.8×10^{-2}	21 ± 1 °C; r.o.o.g.	[6], [13]
	Mg^{2+}-25 (w = 1 %), KTpClPB (x_i = 170 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, +0.8; Na^+, +1.8; K^+, +4.3; Rb^+, +5.3; NH_4^+, +3.8; Ca^{2+}, +0.7; Ba^{2+}, +1.1; H^+, +6.5	SSM	0.1	0.1	–	–	21 ± 1 °C; lg P_{TLC} = 6.9 ± 0.6; r.o.o.g.	[6], [13]
Mg^{2+}-26	**Mg^{2+}-26** (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 66 %), PVC (w = 33 %)	Li^+, –4.3; Na^+, –4.3; K^+, –2.8; Rb^+, –2.0; Ca^{2+}, –1.0; Sr^{2+}, –2.2; H^+, +1.3	SSM	0.1	0.1		–	pH = 7.4; r.o.o.g.	[14]
	Mg^{2+}-26 (w = 1 %), PVC (w = 33 %), ETH 5373 (w = 66 %), KTpClPB (x_i = 155 %)	Li^+, –5.5; Na^+, –5.0; K^+, –3.4; Rb^+, –2.5; Ca^{2+}, –1.5; Sr^{2+}, –3.0; H^+, +0.7	SSM	0.1	0.1		–	pH = 7.4; r.o.o.g.	[14]
	Mg^{2+}-26 (w = 1 %), ETH 500 (w = 3 %), PVC (w = 33 %), KTpClPB (x_i = 155 %), oNPOE (w = 63 %)	Li^+, –4.8; Na^+, –4.7; K^+, –2.9; Rb^+, –2.0; Ca^{2+}, –1.3; Sr^{2+}, –2.7; H^+, +0.9	SSM	0.1	0.1	29.5 ± 0.3 (37 °C)	10^{-4} – 10^{-1}	pH = 7.4; r.o.o.g.	[14]
	Mg^{2+}-26 (w = 8.8 %), ETH 500 (w = 4.4 %), KTpClPB (x_i = 60 %), oNPOE (w = 71.8 %), PVC (w = 12 %)	Li^+, –2.7; Na^+, –3.1; K^+, –3.1; NH_4^+, –2.5; Ca^{2+}, +0.7; Sr^{2+}, +0.4; Ba^{2+}, +0.6; H^+, +1.6; $AcCh^+$, –0.3	SSM	0.1	0.1	29.1 ± 0.5	10^{-4} – 10^{-2}	21 ± 1 °C; microelec.; $c_{dl} = 10^{-4.8 \pm 0.1}$ M; t_{90} < 30 s; r.o.o.g.	[10]
	Mg^{2+}-26 (w = 8.8 %), ETH 500 (w = 0.9 %), KTpClPB (x_i = 150 %), oNPOE (w = 70.8 %), PVC (w = 12 %)	Li^+, –3.5; Na^+, –3.2; K^+, –2.7; NH_4^+, –2.2; Ca^{2+}, –0.7; Sr^{2+}, –1.3; Ba^{2+}, –1.2; H^+, +2.3; $AcCh^+$, +2.7	SSM	0.1	0.1	29.1 ± 0.5	10^{-4} – 10^{-2}	21 ± 1 °C; microelec.; $c_{dl} = 10^{-4.8 \pm 0.2}$ M; r.o.o.g.	[10]
	Mg^{2+}-26 (w = 1 %), KTpClPB (x_i = 155 %), ETH 500 (w = 3 %),	Li^+, –4.8; Na^+, –4.6; K^+, –2.8; Rb^+, –2.0; Ca^{2+}, –1.2; Sr^{2+}, –2.6; Ba^{2+}, –2.5; H^+, +1.1	SSM	0.1	0.1	29.23 ± 0.5	–	21.5 ± 1 °C; $c_{dl} = 10^{-5.0}$ M; t_{90} < 30 s;	[11]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oNPOE (w = 59 %), PVC (w = 36 %)							r.o.o.g.	
	Mg^{2+}-26 (w = ? %), KTpClPB (x_i = 60 %), ETH 500 (w = ? %), oNPOE (w = ? %), PVC (w = ? %)	Li^+, –2.6; Na^+, –3.1; K^+, –3.1; NH_4^+, –2.5; $AcCh^+$, –0.3; Ca^{2+}, +0.8; Sr^{2+}, +0.4; Ba^{2+}, +0.6; H^+, +1.6	SSM	0.1	0.1	29.23 ± 0.5	–	21.5 ± 1 °C; r.o.o.g.	[11]
	Mg^{2+}-26 (w = ? %), KTpClPB (x_i = 150 %), ETH 500 (w = ? %), oNPOE (w = ? %), PVC (w = ? %)	Li^+, –3.4; Na^+, –3.2; K^+, –2.7; NH_4^+, –2.3; $AcCH^+$, +2.8; Ca^{2+}, –0.7; Sr^{2+}, –1.3; Ba^{2+}, –1.2; H^+, +2.3	SSM	0.1	0.1	29.23 ± 0.5	–	21.5 ± 1 °C; r.o.o.g.	[11]
	Mg^{2+}-26 (w = 0.4 %), KTpClPB (x_i = 155 %), oNPOE (w = 63 %), PVC (w = 36 %)	Ca^{2+}, –0.80 Ca^{2+}, –0.35	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 0.6 %), KTpClPB (x_i = 155 %), oNPOE (w = 63 %), PVC (w = 36 %)	Ca^{2+}, –0.90 Ca^{2+}, –0.50	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 62 %), PVC (w = 36 %)	Ca^{2+}, –1.00 Ca^{2+}, –0.35	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 0.3 %), KTpClPB (x_i = 155 %), oNPOE (w = 60 %), PVC (w = 36 %), ETH 500 (w = 3 %)	Ca^{2+}, –0.90 Ca^{2+}, –0.35	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 0.6 %), KTpClPB (x_i = 155 %), oNPOE (w = 60 %), ETH 500 (w = 3 %), PVC (w = 36 %)	Ca^{2+}, –1.05 Ca^{2+}, –0.80	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 1 %), PVC (w = 36 %), KTpClPB (x_i = 155 %), oNPOE (w = 59 %), ETH 500 (w = 3 %)	Ca^{2+}, –1.20 Ca^{2+}, –0.75	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 3 %), PVC (w = 36 %), KTpClPB (x_i = 155 %), oNPOE (w = 55 %), ETH 500 (w = 3 %)	Ca^{2+}, –1.40 Ca^{2+}, –0.60	SSM SAM†	0.1 –	0.1 –	29.23 ± 0.5	– 	21.5 ± 1 °C; $c_{dl} \approx 10^{-5.0}$ M † see ref 15.	[15]
	Mg^{2+}-26 (w = 1 %), PVC and oNPOE (1:2 by weight)	Li^+, +0.9; Na^+, +0.9; K^+, +1.1; NH_4^+, +1.4; Ca^{2+}, +0.3; Sr^{2+}, –0.1; Ba^{2+}, +0.2; H^+, +5.6	SSM	0.1	0.1	nN	–	21 ± 1 °C; r.o.o.g.	[16]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Mg^{2+}-26 (w = 3 %), ETH 500 (w = 3.5 %), KTpClPB (x_i = 155 %), PVC and oNPOE (1:2 by weight)	Li^+, –2.9; Na^+, –3.4; K^+, –2.6; Rb^+, –2.4; Cs^+, –1.4; NH_4^+, –2.9; Ca^{2+}, –1.1; Sr^{2+}, –0.1; Ba^{2+}, +0.2; H^+, +1.3	SSM	0.1	0.1	29.5	–	21 ± 1 °C; r.o.o.g.	[16]
	Mg^{2+}-26 (w = 1 %), poly(2-acryl-amido-2-methyl-1-propane sulphonic acid–co-styrene) (x_i = 155 %), PVC and oNPOE (1:2 by weight)	Li^+, –0.6; Na^+, –1.1; K^+, –0.9; Rb^+, –1.1; Cs^+, –0.8; NH_4^+, –0.6; Ca^{2+}, +0.9; Sr^{2+}, +0.5; Ba^{2+}, +0.8; H^+, +3.3	SSM	0.1	0.1	29.6	–	21 ± 1 °C; r.o.o.g.	[16]
	Mg^{2+}-26 (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –4.6; Na^+, –4.2; K^+, –2.7; Rb^+, –1.4; Ca^{2+}, –1.0; Sr^{2+}, –2.3; H^+, +0.9	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C;	[17]
	Mg^{2+}-26 (w = 1 %), PVC (w = 33 %), ETH 5373 (w = 65 %), KTpClPB (x_i = 155 %)	Li^+, –4.9; Na^+, –4.5; K^+, –3.3; Rb^+, –2.2; Ca^{2+}, –1.3; Sr^{2+}, –2.7; H^+, +1.5	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[17]
	Mg^{2+}-26 (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 66 %), PVC (w = 33 %)	Li^+, –4.6; Na^+, –4.2; K^+, –2.7; Ca^{2+}, –1.0; Sr^{2+}, –2.3; H^+, +0.9	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
	Mg^{2+}-26 (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 55 %), PVC (w = 43 %)	Li^+, –4.9; Na^+, –4.7; K^+, –2.9; Ca^{2+}, –1.2	–	–	–	29	–	37 ± 0.5 °C	[18]
Mg^{2+}-27	**Mg^{2+}-27** (w = 1 %), oNPOE (w = 59 %), KTpClPB (x_i = 155 %), ETH 500 (w = 3 %), PVC (w = 36 %)	Li^+, –4.7; Na^+, –4.8; K^+, –3.8; NH_4^+, –3.9; Ca^{2+}, –1.5; Sr^{2+}, –2.7; H^+, –0.6	SSM	0.1	0.1	29.23 ± 0.5	–	21.5 ± 1 °C; $c_{dl} = 10^{-5}$ M; $t_{90} < 30$ s; r.o.o.g.	[11]
	Mg^{2+}-27 (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –4.6; Na^+, –4.1; K^+, –3.0; Rb^+, –2.1; Ca^{2+}, –1.4; Sr^{2+}, –2.6; H^+, –1.0	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[17]
	Mg^{2+}-27 (w = 1 %), PVC (w = 33 %), ETH 5373 (w = 65 %), KTpClPB (x_i = 155 %)	Li^+, –5.4; Na^+, –5.0; K^+, –3.8; Rb^+, –3.0; Ca^{2+}, –1.7; Sr^{2+}, –2.9; H^+, –0.3	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[17]
Mg^{2+}-28	**Mg^{2+}-28** (w = 1 %), KTpClPB (x_i = 155 %), oNPOE (w = 66 %), PVC (w = 33 %)	Li^+, –4.3; Na^+, –4.2; K^+, –2.0; Rb^+, –0.8; Ca^{2+}, –1.2; Sr^{2+}, –2.3; H^+, +1.9	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C; $\lg P_{TLC}$ = 7.1 ± 1.2	[17]
	Mg^{2+}-28 (w = 1 %), PVC (w = 33 %), ETH 5373 (w = 66 %), KTpClPB (x_i = 155 %)	Li^+, –4.4; Na^+, –4.0; K^+, –3.1; Rb^+, –2.0; Ca^{2+}, –1.6; Sr^{2+}, –2.8; H^+, +2.3	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[17]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-29	**Mg^{2+}-29** (w = 1 %), PVC (w = 33 %), KTpClPB (x_i = 155 %), oNPOE (w = 65 %)	Li^+, –4.7; Na^+, –4.4; K^+, –2.7; Rb^+, –1.6; Ca^{2+}, –1.7; Sr^{2+}, –2.8; H^+, +0.1	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C; lg P_{TLC} = 8.1 ± 1.2	[17]
	Mg^{2+}-29 (w = 1 %), PVC (w = 33 %), ETH 5373 (w = 65 %), KTpClPB (x_i = 155 %)	Li^+, –4.8; Na^+, –4.7; K^+, –3.7; Rb^+, –2.8; Ca^{2+}, –1.9; Sr^{2+}, –3.1; H^+, +0.9	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[17]
Mg^{2+}-30	**Mg^{2+}-30** (w = 1 %), KTpClPB (x_i = 70 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –2.4; Na^+, –3.0; K^+, –2.0; Ca^{2+}, 0.0; Sr^{2+}, –0.4; H^+, +2.1	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[9]
Mg^{2+}-31	**Mg^{2+}-31** (w = 1 %), KTpClPB (x_i = 70 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –1.9; Na^+, –2.6; K^+, –2.1; Ca^{2+}, +0.8; Sr^{2+}, +0.8; H^+, +3.5	SSM	0.1	0.1	29.2 ± 0.5	–	21 ± 1 °C	[9]
Mg^{2+}-32	**Mg^{2+}-32** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.5; Na^+, –3.4; K^+, –2.7; Ca^{2+}, –0.7; Sr^{2+}, –1.8; H^+, +1.7	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-33	**Mg^{2+}-33** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.6; Na^+, –3.5; K^+, –2.2; Ca^{2+}, –0.8; Sr^{2+}, –2.1; H^+, +1.4	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-34	**Mg^{2+}-34** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.2; Na^+, –3.2; K^+, –1.4; Ca^{2+}, –0.9; Sr^{2+}, –2.0; H^+, +0.5	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-35	**Mg^{2+}-35** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.9; Na^+, –3.7; K^+, –2.0; Ca^{2+}, –0.9; Sr^{2+}, –2.1; H^+, +0.2	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-36	**Mg^{2+}-36** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.9; Na^+, –3.7; K^+, –2.3; Ca^{2+}, –0.8; Sr^{2+}, –1.9; H^+, +0.2	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-37	**Mg^{2+}-37** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.3; Na^+, –2.7; K^+, +1.5; Ca^{2+}, –0.4; Sr^{2+}, –1.4; H^+, +1.3	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-38	**Mg^{2+}-38** (w = 1 %), KTpClPB (x_i = 155 ± 5 %), oNPOE (w = 65 %), PVC (w = 33 %)	Li^+, –3.3; Na^+, –2.9; K^+, –0.2; Ca^{2+}, –0.6; Sr^{2+}, –1.8; H^+, –0.1	SSM	0.1	0.1	N	–	21 ± 1 °C	[9]
Mg^{2+}-39	**Mg^{2+}-39** (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Na^+, –2.0; K^+, –2.1; Ca^{2+}, –1.6	MSM	–	–	23.0	–	25 ± 1 °C; c_{dl} = 2.0 × 10^{-5} M	[19]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-40	**Mg^{2+}-40** (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Na^+, –2.5; K^+, –2.7; Ca^{2+}, –2.2	MSM	–	–	27.0	–	25 ± 1 °C; $c_{dl} = 9.5 \times 10^{-6}$ M	[19]
Mg^{2+}-41	**Mg^{2+}-41** (w = ? %), DBP (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %)	Na^+, –0.3; K^+, –0.2; Ca^{2+}, –0.5	MSM	–	–	11.5	–	25 ± 1 °C; $c_{dl} = 3.6 \times 10^{-3}$ M	[19]
	Mg^{2+}-41 (w = ? %), BEHS (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %)	Na^+, –0.5; K^+, –0.4; Ca^{2+}, –0.8	MSM	–	–	13.6	–	25 ± 1 °C; $c_{dl} = 2.5 \times 10^{-3}$ M	[19]
	Mg^{2+}-41 (w = ? %), TEHP (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %)	Na^+, –0.8; K^+, –0.9; Ca^{2+}, –1.2	MSM	–	–	16.2	–	25 ± 1 °C; $c_{dl} = 1.3 \times 10^{-3}$ M	[19]
	Mg^{2+}-41 (w = ? %), DOPP (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %)	Na^+, –1.6; K^+, –1.8; Ca^{2+}, –1.9	MSM	–	–	22.4	–	25 ± 1 °C; $c_{dl} = 2.2 \times 10^{-5}$ M	[19]
	Mg^{2+}-41 (w = ? %), DPE (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %)	Na^+, –1.2; K^+, –1.4; Ca^{2+}, –1.5	MSM	–	–	18.8	–	25 ± 1 °C; $c_{dl} = 6.5 \times 10^{-3}$ M	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Na^+, –3.1; K^+, –3.3; Ca^{2+}, –2.8	MSM	–	–	30.0	–	25 ± 1 °C; $c_{dl} = 6.3 \times 10^{-6}$ M	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPPE (w = ? %)	Na^+, –3.0; K^+, –3.1; Ca^{2+}, –2.2	MSM	–	–	24.5	–	25 ± 1 °C; $c_{dl} = 3.0 \times 10^{-5}$ M	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 45 %)	Ca^{2+}, –0.6	MSM	–	–	7	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 47 %)	Ca^{2+}, –1.0	MSM	–	–	10	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 50 %)	Ca^{2+}, –1.5	MSM	–	–	15	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 52 %)	Ca^{2+}, –1.9	MSM	–	–	19	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 56 %)	Ca^{2+}, –2.4	MSM	–	–	24	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %),	Ca^{2+}, –2.7	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oNPOE (w = 60 %)								
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 64 %)	Ca^{2+}, –2.8	MSM	–	–	30	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 66 %)	Ca^{2+}, –2.8	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 69 %)	Ca^{2+}, –2.5	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = 72 %)	Ca^{2+}, –2.3	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 0.5 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.3	MSM	–	–	15	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 1.0 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.7	MSM	–	–	19	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 1.5 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.2	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 2.0 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.5	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 2.3 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.7	MSM	–	–	30	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 2.6 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.8	MSM	–	–	30	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 3.0 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.8	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 3.3 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.6	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Mg^{2+}-41 (w = 4.0 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.3	MSM	–	–	28	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 4.3 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.1	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 5.1 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.0	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 6.3 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.9	MSM	–	–	26	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 7.7 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.8	MSM	–	–	26	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 8.4 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.7	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 10 %), KTpClPB (x_i = ? %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.7	MSM	–	–	24	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 10 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –1.6	MSM	–	–	22	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 20 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.1	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 30 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.4	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 40 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.7	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 50 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.8	MSM	–	–	30	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 60 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.8	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 70 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.7	MSM	–	–	28	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 84 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.6	MSM	–	–	26	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 100 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.5	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 120 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.3	MSM	–	–	23	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 135 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.2	MSM	–	–	21	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = 150 %), PVC (w = ? %), oNPOE (w = ? %)	Ca^{2+}, –2.0	MSM	–	–	19	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = 32 %), oNPOE (w = ? %)	Ca^{2+}, –2.8	MSM	–	–	30	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = 37 %) oNPOE (w = ? %),	Ca^{2+}, –2.7	MSM	–	–	29	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = 42 %), oNPOE (w = ? %)	Ca^{2+}, –2.6	MSM	–	–	28	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = 45 %), oNPOE (w = ? %)	Ca^{2+}, –2.5	MSM	–	–	27	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = ? %), KTpClPB (x_i = ? %), PVC (w = 48 %), oNPOE (w = ? %)	Ca^{2+}, –2.1	MSM	–	–	25	–	25 ± 1 °C; r.o.o.g.	[19]
	Mg^{2+}-41 (w = 2.66 %), KTpClPB (x_i = 50 %), oNPOE (w = 64 %), PVC (w = 32 %)	Li^+, –3.8; Na^+, –3.1; K^+, –3.3; Cs^+, –3.2; NH_4^+, –3.4; Ca^{2+}, –2.8; Sr^{2+}, –3.6; Ba^{2+}, –3.2; Co^{2+}, –3.7; Ni^{2+}, –4.0; Cu^{2+}, –4.1; Cd^{2+}, –3.9; Al^{3+}, –3.9	MSM	–	–	30	3.2 $\times 10^{-5}$ –10^{-1}	25 ± 1 °C; c_{dl} = 6.3 $\times 10^{-6}$ M	[19]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-42	**Mg^{2+}-42** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.8; Na^+, –1.6; K^+, +0.5; Rb^+, +1.6; Cs^+, +2.8; NH_4^+, +0.1; Ca^{2+}, –0.8; Sr^{2+}, –1.0; Ba^{2+}, –0.4; H^+, –0.2	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 7.4 ± 0.4	[20]
Mg^{2+}-43	**Mg^{2+}-43** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –2.6; Na^+, –1.8; K^+, –0.4; Rb^+, –0.4; Cs^+, 0.0; NH_4^+, +0.8; Ca^{2+}, +1.7; Sr^{2+}, +0.1; Ba^{2+}, 0.0; H^+, –0.6	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 6.9 ± 0.4	[20]
Mg^{2+}-44	**Mg^{2+}-44** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –2.7; Na^+, –2.4; K^+, –1.7; Rb^+, –1.2; Cs^+, –0.5; NH_4^+, –2.0; Ca^{2+}, –1.2; Sr^{2+}, –1.6; Ba^{2+}, –1.7; H^+, –1.0	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 15.0 ± 0.3	[20]
Mg^{2+}-45	**Mg^{2+}-45** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.8; Na^+, –1.2; K^+, –1.4; Rb^+, –1.5; Cs^+, –1.5; NH_4^+, –1.5; Ca^{2+}, 0.0; Sr^{2+}, –0.7; Ba^{2+}, –0.7; H^+, –1.2	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 4.5 ± 0.2	[20]
Mg^{2+}-46	**Mg^{2+}-46** (w = 2 %), KTpClPB (x_i = 50 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –3.1; Na^+, –3.8; K^+, –3.1; Rb^+, –2.4; Cs^+, –2.4; NH_4^+, –2.9; Ca^{2+}, +0.8; Sr^{2+}, –0.1; Ba^{2+}, –0.7	SSM	0.1	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[20]
	Mg^{2+}-46 (w = 2 %), KTpClPB (x_i = 75 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –3.1; Na^+, –3.9; K^+, –2.9; Rb^+, –2.5; Cs^+, –2.0; NH_4^+, –2.9; Ca^{2+}, +0.7; Sr^{2+}, –0.3; Ba^{2+}, –1.0	SSM	0.1	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[20]
	Mg^{2+}-46 (w = 2 %), KTpClPB (x_i = 85 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –3.6; Na^+, –3.4; K^+, –2.0; Rb^+, –0.9; Cs^+, –0.5; NH_4^+, –2.4; Ca^{2+}, –0.1; Sr^{2+}, –2.0; Ba^{2+}, –1.5	SSM	0.1	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[20]
	Mg^{2+}-46 (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –3.8; Na^+, –3.2; K^+, –1.5; Rb^+, –0.6; Cs^+, +0.7; NH_4^+, –2.0; Ca^{2+}, –2.5; Sr^{2+}, –3.0; Ba^{2+}, –2.3; H^+, –0.7	SSM	0.1	0.1	N	2 × 10^{-5} –10^{-1}	25 ± 0.5 °C; lg $P_{o/w}$ = 3.0 ± 0.4	[20]
	Mg^{2+}-46 (w = 2 %), KTpClPB (x_i = 125 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –2.7; Na^+, –1.9; K^+, +0.3; Rb^+, +0.8; Cs^+, +1.7; NH_4^+, –0.4; Ca^{2+}, –2.0; Sr^{2+}, –2.4; Ba^{2+}, –1.8	SSM	0.1	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[20]
Mg^{2+}-47	**Mg^{2+}-47** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.1; Na^+, –1.4; K^+, –1.9; Rb^+, –2.0; Cs^+, –1.6; NH_4^+, –2.5; Ca^{2+}, –0.5; Sr^{2+}, –1.4; Ba^{2+}, –1.8; H^+, –0.9	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 3.4 ± 0.4	[20]

Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Mg^{2+},B}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Mg^{2+}-48	**Mg^{2+}-48** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –0.7; Na^+, –0.6; K^+, +3.7; Rb^+, +4.7; Cs^+, +6.1; NH_4^+, +3.1; Ca^{2+}, 0.0; Sr^{2+}, +0.2; Ba^{2+}, +0.6; H^+, +1.6	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 1.8 ± 0.2	[20]
Mg^{2+}-49	**Mg^{2+}-49** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –2.8; Na^+, +0.8; K^+, +2.8; Rb^+, +4.1; Cs^+, +4.3; NH_4^+, +2.5; Ca^{2+}, +0.7; Sr^{2+}, +0.6; Ba^{2+}, +1.1; H^+, +1.1	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 2.3 ± 0.2	[20]
Mg^{2+}-50	**Mg^{2+}-50** (w = 2 %), KTpClPB (x_i = 50 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –0.2; Na^+, –0.6; K^+, –0.5; Rb^+, –0.3; Cs^+, +0.5; NH_4^+, –0.1; Ca^{2+}, –0.9; Sr^{2+}, –1.2; Ba^{2+}, –1.2; H^+, 0.0	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 5.1 ± 0.4	[20]
Mg^{2+}-51	**Mg^{2+}-51** (w = 2 %), KTpClPB (x_i = 50 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.3; Na^+, –1.5; K^+, –0.8; Rb^+, –0.1; Cs^+, 1.3; NH_4^+, 0.3; Ca^{2+}, –0.5; Sr^{2+}, –0.7; Ba^{2+}, –0.6; H^+, –0.2	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 3.2 ± 0.3	[20]
Mg^{2+}-52	**Mg^{2+}-52** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, +4.6; Na^+, +1.7; K^+, +4.9; Rb^+, +5.9; Cs^+, +7.1; NH_4^+, +4.5; Ca^{2+}, +0.5; Sr^{2+}, +0.6; Ba^{2+}, +1.1; H^+, +1.3	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 4.0 ± 0.3	[20]
Mg^{2+}-53	**Mg^{2+}-53** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.1; Na^+, –1.6; K^+, 0.0; Rb^+, +0.5; Cs^+, +1.2; NH_4^+, –0.9; Ca^{2+}, –0.3; Sr^{2+}, –1.0; Ba^{2+}, –1.0; H^+, +0.3	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 4.6 ± 0.4	[20]
Mg^{2+}-54	**Mg^{2+}-54** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.3; Na^+, –1.9; K^+, –1.0; Rb^+, –0.6; Cs^+, 0.0; NH_4^+, –1.4 ; Ca^{2+}, +0.2; Sr^{2+}, –0.1; Ba^{2+}, –0.4; H^+, –0.1	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 6.1 ± 0.4	[20]
Mg^{2+}-55	**Mg^{2+}-55** (w = 2 %), KTpClPB (x_i = 100 %), oNPOE (w = 66 %), PVC (w = 31 %)	Li^+, –1.9; Na^+, –3.2; K^+, –2.6; Rb^+, –2.3; Cs^+, –1.6; NH_4^+, –3.0 ; Ca^{2+}, –0.7; Sr^{2+}, –1.2; Ba^{2+}, –1.5; H^+, –1.0	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 7.6 ± 0.4	[20]
Mg^{2+}-56	**Mg^{2+}-56** (w = 2 %), oNPOE (w = 66 %), KTpClPB (x_i = 100 %), PVC (w = 31 %)	Li^+, –1.1; Na^+, –0.4; K^+, +1.6; Rb^+, +2.5; Cs^+, +3.5; NH_4^+, +1.3 ; Ca^{2+}, +0.9; Sr^{2+}, +0.8; Ba^{2+}, +1.3; H^+, +0.9	SSM	0.1	0.1	–	–	25 ± 0.5 °C; lg $P_{o/w}$ = 6.2 ± 0.4	[20]

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Table 8: Mg^{2+}-Selective Electrodes (*Continued*)

(1) D. Erne, N. Stojanac, D. Ammann, E. Pretsch, W. Simon, *Helv. Chim. Acta*, **63**, 2264–2270 (1980).
(2) M. Maj-Zurawska, W. Buchser, D. Ammann, D.H. Welti, E. Pretsch, W. Keller-Schierlein, W. Simon, *Mikrochim. Acta*, **II**, 1–10 (1987).
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(15) R. Eugster, B. Rusterholz, A. Schmid, U.E. Spichiger, W. Simon, *Clin. Chem.*, **39**, 855–859 (1993).
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(17) J. O'Donnell, H. Li, B. Rusterholz, U. Pedrazza, W. Simon, *Anal. Chim. Acta*, **281**, 129–134 (1993).
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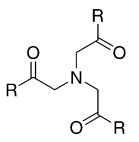
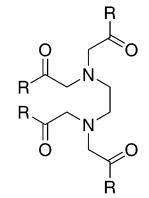
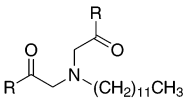
(20) K. Suzuki, K. Watanabe, Y. Matsumoto, M. Kobayashi, S. Sato, D. Siswanta, H. Hisamoto, *Anal. Chem.*, **67**, 324–334 (1995).



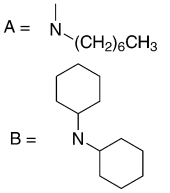
Mg^{2+}-1 (M_r = 524.83): R = A

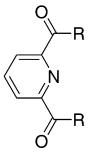


Mg^{2+}-2 (M_r = 737.16): R = A

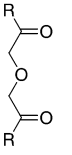


Mg^{2+}-3 (M_r = 523.88): R = A

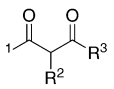




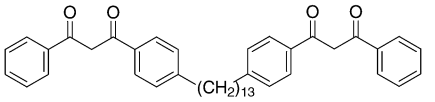
Mg^{2+}-4 (M_r = 389.58): R = A
Mg^{2+}-5 (M_r = 493.73): R = B



Mg^{2+}-6 (M_r = 460.69): R = B

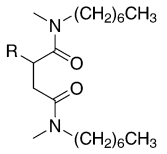


Mg^{2+}-7 (M_r = 224.26): R^1 = R^3 = phenyl, R^2 = H
Mg^{2+}-8 (ETH 245, M_r = 258.71): R^1 = phenyl, R^2 = H, R^3 = *p*-Cl-phenyl
Mg^{2+}-9 (ETH 248, M_r = 293.15): R^1 = R^3 = *p*-Cl-phenyl, R^2 = H
Mg^{2+}-19 (M_r = 154.09): R^1 = phenyl, R^2 = H, R^3 = CF_3
Mg^{2+}-20 (M_r = 176.21): R^1 = R^3 = CH_3, R^2 = phenyl

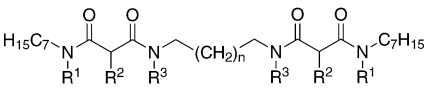


Mg^{2+}-10 (ETH 1224, M_r = 628.86)

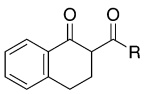
Table 8: Mg^{2+}-Selective Electrodes (*Continued*)



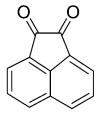
Mg^{2+}-11 (ETH 1117, M_r = 340.54): R = H
Mg^{2+}-12 (ETH 2220, M_r = 355.57): R = NH_2



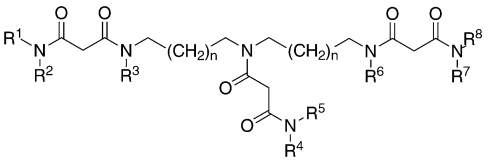
Mg^{2+}-13 (M_r = 484.73): n = 2, R^1 = CH_3, R^2 = H, R^3 = H
Mg^{2+}-14 (M_r = 512.78): n = 4, R^1 = CH_3, R^2 = H, R^3 = H
Mg^{2+}-15 (ETH 4030, M_r = 540.83): n = 6, R^1 = CH_3, R^2 = H, R^3 = H
Mg^{2+}-16 (M_r = 568.89): n = 8, R^1 = CH_3, R^2 = H, R^3 = H
Mg^{2+}-17 (ETH 5214, M_r = 568.89): n = 6, R^1 = CH_3, R^2 = CH_3, R^3 = H
Mg^{2+}-24 (ETH 5220, M_r = 512.78): n = 6, R^1 = H, R^2 = H, R^3 = H
Mg^{2+}-30 (ETH 4083, M_r = 540.84): n = 6, R^1 = H, R^2 = H, R^3 = CH_3
Mg^{2+}-31 (ETH 5222, M_r = 568.89): n = 6, R^1 = CH_3, R^2 = H, R^3 = CH_3

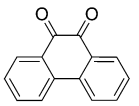


Mg^{2+}-18 (M_r = 188.23): R = CH_3
Mg^{2+}-21 (M_r = 272.39): R = $(CH_2)_6CH_3$



Mg^{2+}-22 (M_r = 182.17)





Mg^{2+}-23 (M_r = 208.21)

Mg^{2+}-25 (ETH 5282, M_r = 807.22): n = 4, R^1, R^4, R^7 = CH_3, R^2, R^5, R^8 = $(CH_2)_6CH_3$, R^3, R^6 = H
Mg^{2+}-26 (ETH 7025, M_r = 863.33): n = 6, R^1, R^5, R^8 = $(CH_2)_6CH_3$, R^2, R^4, R^7 = CH_3, R^3, R^6 = H
Mg^{2+}-28 (ETH 7160, M_r = 971.42): n = 6, R^1, R^4, R^7 = CH_3, R^2, R^8 = 1-adamantyl, R^3, R^6 = H, R^5 = $(CH_2)_6CH_3$
Mg^{2+}-32 (ETH 8020, M_r = 891.37): n = 6, R^1, R^5, R^8 = $(CH_2)_6CH_3$, R^2, R^3, R^4, R^6, R^7 = CH_3
Mg^{2+}-33 (ETH 8092,M_r = 877.35): n = 6, R^1, R^5, R^8 = $(CH_2)_6CH_3$, R^2, R^3, R^4, R^7 = CH_3, R^6 = H
Mg^{2+}-34 (ETH 4310, M_r = 863.32): n = 6, R^1, R^8 = $(CH_2)_6CH_3$, R^2, R^7 = CH_3, R^3, R^4, R^6 = H, R^5 = $(CH_2)_7CH_3$
Mg^{2+}-35 (ETH 8091, M_r = 877.35): n = 6, R^1, R^5 = $(CH_2)_7CH_3$, R^2, R^4, R^6 = H, R^3, R^7 = CH_3, R^8 = $(CH_2)_6CH_3$
Mg^{2+}-36 (ETH 8026, M_r = 891.38): n = 6, R^1, R^5, R^8 = $(CH_2)_7CH_3$, R^2, R^4, R^7 = H, R^3, R^6 = CH_3
Mg^{2+}-37 (ETH 4328, M_r = 863.32): n = 6, R^1, R^8 = $(CH_2)_7CH_3$, R^2, R^3, R^6, R^7 = H, R^4 = CH_3, R^5 = $(CH_2)_6CH_3$
Mg^{2+}-38 (ETH 4320, M_r = 863.32): n = 6, R^1, R^5, R^8 = $(CH_2)_7CH_3$, R^2, R^3, R^4, R^6, R^7 = H

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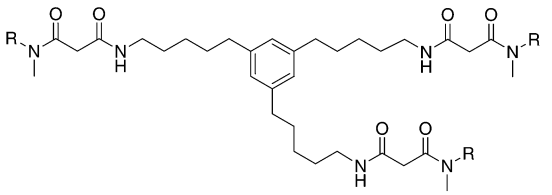
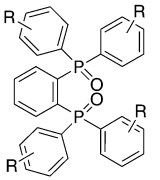
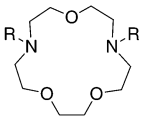
Table 8: Mg^{2+}-Selective Electrodes (*Continued*)



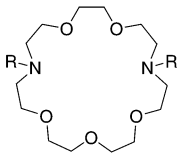
Mg^{2+}-27 (ETH 3832, M_r = 925.39): R = $(CH_2)_6CH_3$
Mg^{2+}-29 (ETH 5506, M_r = 1033.49): R = 1-adamantyl



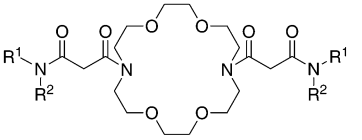
Mg^{2+}-39 (M_r = 658.46): R = NO_2
Mg^{2+}-40 (M_r = 478.46): R = H
Mg^{2+}-41 (M_r = 534.58): R = CH_3



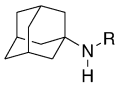
Mg^{2+}- 42 (K21B, M_r = 725.07): R = C



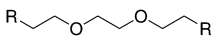
Mg^{2+}- 43 (K23B, M_r = 813.18): R = C



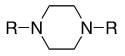
Mg^{2+}-44 (K22B1, M_r = 937.45): R^1 = H, R^2 = $(CH_2)_{17}CH_3$
Mg^{2+}-45 (K22B4, M_r = 761.06): R^1 = R^2 = cyclohexyl
Mg^{2+}-46 (K22B5, M_r = 700.92): R^1 = H, R^2 = 1-adamantyl
Mg^{2+}-47 (K22B6, M_r = 706.97): R^1 = H, R^2 = 4-*tert*-butylcyclohexyl
Mg^{2+}-48 (K22B7, M_r = 584.68): R^1 = H, R^2 = C_6H_5
Mg^{2+}-49 (K22B8, M_r = 736.87): R^1 = R^2 = C_6H_5



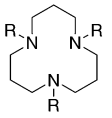
Mg^{2+}- 50 (Basic-B5, M_r = 370.54): R = D



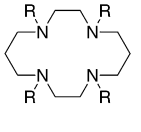
Mg^{2+}-51 (K2B5, M_r = 556.75): R = D



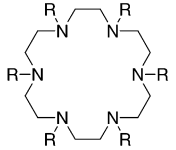
Mg^{2+}- 52 (6A2B5, M_r = 524.71): R = D



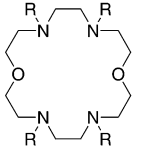
Mg^{2+}- 53 (12A3B5, M_r = 829.15): R = D



Mg^{2+}- 54 (14A4B5, M_r = 1077.47): R = D



Mg^{2+}- 55 (18A6B5, M_r = 1574.13): R = D



Mg^{2+}-56 (18A4O2B5, M_r = 1137.53): R = D