Table 3: Na^+–Selective Electrodes

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-1	**Na^+-1** (w = 9.7 %), sodium dipicrylamide (x_i = 16 %), FNDPE (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –3.0; K^+, –2.4; Rb^+, –3.1; Cs^+, –3.5; H^+, –1.9	FIM	–	0.05	59	10^{-4}–1.0	25 °C	[1]
		Mg^{2+}, –4.0; Ca^{2+}, –3.8; Sr^{2+}, –4.0; Ba^{2+}, –3.2; NH_4^+, –4.2	FIM	–	0.5				
	Na^+-1 (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 8–3 %), PVC (w = 24.3–20.3 %)	Li^+, –2.81; K^+, –2.17; H^+, –3.53	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –3.34; Mg^{2+}, –4.39; Ca^{2+}, –3.94	FIM	–	0.5				
Na^+-2	**Na^+-2** (w = 9.7 %), sodium dipicrylamide (x_i = 15 %), BEHS (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –2.4; K^+, –2.1; Rb^+; –3.2; Cs^+, –3.9; H^+, –2.5	FIM	–	0.05	59	10^{-4}–1.0	25 °C	[1]
		NH_4^+, –4.3; Mg^{2+}, –4.7; Ca^{2+}, –2.8; Sr^{2+}, –2.9; Ba^{2+}, –3.1	FIM	–	0.5				
Na^+-3	**Na^+-3** (w = 0.7 %), KTpClPB (x_i = 57 %), oNPOE (w = 66.1 %), PVC (w = 33.0 %)	Li^+, –2.5; K^+, –1.9; Cs^+, –1.6	SSM	0.1	0.1	60.0	–	$c_{dl} = 3.5 \times 10^{-6}$ M;	[3]
		Mg^{2+}> –6; Ca^{2+}, –2.5	FIM	–	0.1			t_{resp} = 20.0 s	
	Na^+-3 (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 5.6–1.8 %), PVC (w = 24.3–20.3 %)	Li^+, –3.44; K^+, –2.56; H^+, –3.49	FIM	–	0.05	58–59	$10^{-5.0}$–1.0	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.42; Mg^{2+}, –4.64; Ca^{2+}, –4.09	FIM	–	0.5				
	Na^+-3 (w = 9.7–24.4 %), oNPOE (w = 65.5–54.9 %), NaTFPB (x_i = 5.6–1.8 %), PVC (w = 24.3–20.3 %)	Li^+, –2.98; K^+, –2.51; H^+, –3.10	FIM	–	0.05	58–59	$10^{-5.0}$–1.0	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.03; Mg^{2+}, –4.39; Ca^{2+}, –3.98	FIM	–	0.5				
	Na^+-3 (w = 9.7–24.4 %), FNDPE (w = 65.5–54.9 %), NaTFPB (x_i = 5.6–1.8 %), PVC (w = 24.3–20.3 %)	Li^+, –3.39; K^+, –2.57; H^+, –2.49	FIM	–	0.05	50	$10^{-5.0}$–1.0	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.18; Mg^{2+}, –4.62; Ca^{2+}, –4.11	FIM	–	0.5				
	Na^+-3, sodium triphenyl 1-(4-methacryl	Li^+, –2.9, –2.8;* K^+, –2.3; –2.4;*	FIM	–	0.5	56–58 55–57*		ISEFT; *after 90 d	[4]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$lgK_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oxymethylphenyl) borate Both were covalently attached to poly- siloxane and cyanopropyl copolymer.	Rb^+, –2.9, –2.7;* Cs^+, –2.6, –2.4;* Mg^{2+}, –3.3, –3.6;* Ca^{2+}, –3.1, –3.0*						in 0.1 M NaCl; t_{resp} < 250 ms; τ = 180–270 d	
	Na^+-3 (w = 1.0 %), DOS (w = 6.0 %), NaTFPB (x_i = 22 %), silicone rubber (w = 92.8 %)	K^+, –2.5; Ca^{2+}, –3.3	FIM	–	0.1	59.7	–	22 ± 2 °C; ISFET	[5]
	Na^+-3 (w = 1.0 %), DOS (w = 5.1 %), NaTFPB (x_i = 50 %), silicone rubber (w = 93.45 %)	K^+, –2.6; Ca^{2+}, –3.3	FIM	–	0.1	59.1	–	22 ± 2 °C; ISFET	[5]
	Na^+-3 (w = 1.0 %), NaTFPB (x_i = 50 %), silicone rubber (w = 98.55 %)	K^+, –2.5; Ca^{2+}, –3.4	FIM	–	0.1	59.4	–	22 ± 2 °C	[5]
	Na^+-3 (w = 1.1 %), NaTFPB (x_i = 56 %), DOS (w = 4.6 %), silicone rubber (w = 93.8 %)	K^+, –2.6; Ca^{2+}, –3.4	FIM	–	0.1	58.7	–	22 ± 2 °C; solid-state	[5]
	Na^+-3 (w = 1.1 %), NaTFPB (x_i = 56 %), silicone rubber (w = 98.4 %)	K^+, –2.5; Ca^{2+}, –3.3	FIM	–	0.1	58.1	–	22 ± 2 °C; solid-state	[5]
	Na^+-3 (w = 10 %), silicone rubber (w = 90 %)	K^+, –2.4; H^+, –3.0; Li^+, –2.9; Mg^{2+}, –3.5; Ca^{2+}, –3.9	FIM	– –	0.1 0.5	N	–	ISFET; t_{90} = 3 s; r.o.o.g.	[6]
Na^+-4	**Na^+-4** (w = 0.7 %), KTpClPB (x_i = 50 %), oNPOE (w = 66.1 %), PVC (w = 33.0 %)	Li^+, –2.5; K^+, –2.3; Cs^+, –2.7; Mg^{2+}, –2.3; Ca^{2+}, –2.6	SSM FIM	0.1 –	0.1 0.1	57.0	–	c_{dl} = 3.1 × 10^{-6} M; t_{resp} = 20.0 s	[3]
	Na^+-4 (w = 0.66 %), oNPOE (w = 66.33 %), PVC (w = 33.11 %)	Li^+, –2.37; K^+, –2.44; Cs^+, –3.57; NH_4^+, –3.32; Mg^{2+}, –2.10; Ca^{2+}, –2.59	SSM	0.1	0.1	58.0	–	25 °C; c_{dl} = 2.8 × 10^{-6} M; t_{90} < 10 s; pH = 10.5	[7]
	Na^+-4 (w = 0.66 %), oNPOE (w = 66.10 %), KTpClPB (x_i = 50 %), PVC (w = 33.05 %)	Li^+, –2.46; K^+, –2.44; Cs^+, –3.81; NH_4^+, –3.50; Mg^{2+}, –2.18; Ca^{2+}, –2.63	MSM	–	0.001	59.7	–	25 °C; c_{dl} = 2.3 × 10^{-6} M; t_{90} < 10 s; pH = 10.5;	[7]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-4 (w = 0.66 %), KTpClPB (x_i = 50 %), DOS (w = 66.10 %), PVC (w = 33.05 %)	Li^+, –2.46; K^+, –2.42; Cs^+, –3.60; NH_4^+, –3.37; Mg^{2+}, –2.22; Ca^{2+}, –2.57	SSM	–	–	60.3	–	$c_{dl} = 3.1 \times 10^{-6}$ M; 25 °C; pH = 10.5; τ = 120 d	[7]
	Na^+-4 (w = 0.66 %), DOPP (w = 66.10 %), KTpClPB (x_i = 50 %), PVC (w = 33.05 %)	Li^+, –0.54; K^+, –1.49; Cs^+, –1.92; NH_4^+, –0.49; Mg^{2+}, –2.02; Ca^{2+}, –2.32	SSM	–	–	53.6	–	$c_{dl} = 8.7 \times 10^{-7}$ M; 25 °C; pH = 10.5	[7]
Na^+-5	**Na^+-5** (w = 2.3 %), KTpClPB (x_i = 50–60 %), BEHS or BBPA (w = 64.7 %), PVC (w = 32.4–32.3 %),	Li^+, –2.31 ± 0.03; Rb^+, –2.56 ± 0.07; Ca^{2+}, –2.90 ± 0.32; K^+, –1.38 ± 0.006	FIM	–	0.1	N	–	ISFET; interlayer: poly (12-hydroxymethyl methacrylate)	[8]
	Na^+-5 (w = 0.7 %), KTpClPB (x_i = 60 %), oNPOE (w = 66.1 %), PVC (w = 33.0 %)	Li^+, –1.7; K^+, –1.1; Cs^+, –2.3; Mg^{2+}, –2.3; Ca^{2+}, –2.8	SSM	0.1	0.1	64.0	–	$c_{dl} = 6.3 \times 10^{-6}$ M; t_{resp} = 40.0 s	[3]
Na^+-6	**Na^+-6** (w = 0.7 %), KTpClPB (x_i = 78 %), oNPOE (w = 66.1 %), PVC (w = 33.0 %)	Li^+, –0.7; K^+, –0.1; Cs^+, –1.6 Mg^{2+}, –1.9; Ca^{2+}, –1.0	SSM FIM	0.1 –	0.1 0.1	53.3	–	$c_{dl} = 7.9 \times 10^{-6}$ M; t_{resp} = 60.0 s	[3]
Na^+-7	**Na^+-7** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 5.6–1.8 %), PVC (w = 24.3–20.3 %)	K^+, –2.25; H^+, –3.18	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
	Na^+-7 (w = 0.7 %), KTpClPB (x_i = 54 %), oNPOE (w = 66.1 %), PVC (w = 33.0 %)	Li^+, –2.5; K^+, –2.2; Cs^+, –1.8 Mg^{2+}, >–6.0; Ca^{2+}, –5.7	SSM FIM	0.1 –	0.1 0.1	60.0	–	$c_{dl} = 2.3 \times 10^{-6}$ M; t_{resp} = 60.0 s	[3]
	Na^+-7 (w = 1.3 %), KTpClPB (x_i = 44 %), oNPOE (w = 65.0 %), PVC (w = 33.0 %)	Li^+, –2.78; K^+, –2.47; Cs^+, –1.51; NH_4^+, –2.74; H^+, –1.88; Mg^{2+}, –3.12; Ca^{2+}, –3.74	SSM	0.1	0.1	58.1 ± 0.8	–	20 ± 0.1 °C; pH = 7.4; minielectrode	[9]
	Na^+-7 (w = 0.7 %), KTpClPB (x_i = 45 %), oNPOE (w = 66.2 %), PVC (w = 32.9 %)	Li^+, –2.86; K^+, –2.59; H^+, –1.98	FIM	–	0.1	59.6 ± 0.17	10^{-4}–10^{-1}	t_{90} < 10 s; 21 ± 1 °C; 5.5 < pH < 9.5	[10]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-8	**Na^+-8** (w = 3.0 %), TEHP (w = 67.0 %), PVC (w = 30.0 %)	Li^+, –2.24; K^+, –2.66; Rb^+, –3.31; Cs^+, –3.84; NH_4^+, –2.45; Mg^{2+}, –4.65; Ca^{2+}, –4.30; Sr^{2+}, –3.86; Ba^{2+}, –4.56;	FIM	–	0.15	59.2 ± 0.1		25 °C; $c_{dl} = 5.5 \times 10^{-5}$ M	[11]
		H^+, +0.66	FIM	–	0.01				
Na^+-9	**Na^+-9** (w = 0.66 %), KTpClPB (x_i = 58 %), DBS (w = 65.84 %), PVC (w = 33.33 %)	Li^+, –2.38; K^+, –1.83; Rb^+, –2.09; Cs^+, –1.80; NH_4^+, –0.85; H^+, –1.91; Be^{2+}, –2.70; Mg^{2+}, –2.86; Ca^{2+}, –2.86; Sr^{2+}, –1.73; Ba^{2+}, –1.90	SSM	0.1	0.1	46.6	–	$c_{dl} = 10^{-4.5}$ M; 25 °C	[12]
	Na^+-9 (w = 0.66 %), KTpClPB (x_i = 58 %), oNPOE (w = 65.84 %), PVC (w = 33.33 %)	Li^+, –3.75; K^+, –2.54; Rb^+, –2.59; Cs^+, –3.40; H^+, –2.80; NH_4^+, –2.76; Be^{2+}, –3.21; Mg^{2+}, –4.29; Ca^{2+}, –4.27; Sr^{2+}, –3.10; Ba^{2+}, –4.08	SSM	0.1	0.1	53.6	–	$c_{dl} = 10^{-4.6}$ M; 25 °C; $t_{resp} < 2$ s; $\tau > 100$ d	[12,14]
		Li^+, –2.7; K^+, –2.2; Rb^+, –2.4; Cs^+, –2.0; H^+, –2.3; NH_4^+, –2.0; Be^{2+}, –3.7; Mg^{2+}, –3.5; Ca^{2+}, –3.5; Sr^{2+}, –3.2; Ba^{2+}, –3.1	FIM	–	0.01	–	–		
Na^+-10	**Na^+-10** (w = 9.7 %), NaTFPB (x_i = 6.9 %), DOP (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –3.2; K^+, –2.4; Rb^+, –3.0; Cs^+, –2.9; H^+, –3.3;	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C; r.o.o.g.	[13]
		NH_4^+, –4.1; Ca^{2+}, –3.7; Mg^{2+}, –4.3; Sr^{2+}, –3.9; Ba^{2+}, –4.2	FIM	–	0.5				
	Na^+-10 (w = 9.7 %), sodium dipicrylamide (x_i = 14 %), DOP (w = 65.5 %), PVC (w = 24.3 %)	K^+, –1.94	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C	[13]
	Na^+-10 (w = 9.7 %), KTpClPB (x_i = 12 %), DOP (w = 65.5 %), PVC (w = 24.3 %)	K^+, –2.29	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C	[13]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-10 (w = 9.7 %), NaTFPB (x_i = 6.9 %), dipentyl phthalate (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –3.1; K^+, –2.4; Rb^+, –2.6; Cs^+, –2.6; H^+, –3.2	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C; r.o.o.g.	[13]
		NH_4^+, –3.5; Ca^{2+}, –3.7; Mg^{2+}, –4.4; Sr^{2+}, –3.8; Ba^{2+}, –4.0	FIM	–	0.5				
	Na^+-10 (w = 9.7 %), NaTFPB (x_i = 6.9 %), BEHS (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –3.2; K^+, –2.2; Rb^+, –3.1; Cs^+, –2.9; H^+, –3.1	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C; r.o.o.g.	[13]
		NH_4^+, –3.7; Ca^{2+}, –3.9; Mg^{2+}, –3.6; Sr^{2+}, –4.0; Ba^{2+}, –4.2	FIM	–	0.5				
	Na^+-10 (w = 9.7 %), NaTFPB (x_i = 6.9 %), oNPOE (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –2.9; K^+, –1.7; Rb^+, –2.9; Cs^+, –2.8; H^+, –3.1	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C; r.o.o.g.	[13]
		NH_4^+, –3.7; Ca^{2+}, –3.6; Mg^{2+}, –3.4; Sr^{2+}, –3.7; Ba^{2+}, –3.9	FIM	–	0.5				
	Na^+-10 (w = 9.7 %), NaTFPB (x_i = 6.9 %), FNDPE (w = 65.5 %), PVC (w = 24.3 %)	Li^+, –2.7; K^+, –1.8; Rb^+, –2.5; Cs^+, –2.8; H^+, –2.7;	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C; r.o.o.g.	[13]
		NH_4^+, –3.5; Mg^{2+}, –4.0; Ca^{2+}, –3.7		–	0.5				
Na^+-11	**Na^+-11** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 62 %), PVC (w = 33.33 %)	Li^+, –2.5; K^+, –1.5; Rb^+, –1.4; Cs^+, –1.2; NH_4^+, –2.4; H^+, –1.2; Be^{2+}, –2.6; Mg^{2+}, –3.3; Ca^{2+}, –3.0; Sr^{2+}, –2.8; Ba^{2+}, –3.3	SSM	–	–	55.6	–	c_{dl} = $10^{-3.8}$ M; 25 °C; τ = 7 d; t_{resp} < 2 s	[14]
Na^+-12	**Na^+12** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 58 %), PVC (w = 33.33 %)	Li^+, –2.7; K^+, –2.3; Rb^+, –3.7; Cs^+, –3.9; NH_4^+, –3.5; H^+, –3.1; Be^{2+}, –3.9; Mg^{2+}, –4.2; Ca^{2+}, –4.3; Sr^{2+}, –3.3; Ba^{2+}, –4.4	SSM	–	–	59.0	–	c_{dl} = $10^{-3.9}$ M; 25 °C; τ = 3 d; t_{resp} < 2 s	[14]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-12 (w = 2.3 %), KTpClPB (x_i = 50–60 %), BEHS or BBPA ($w \approx$ 65 %), PVC ($w \approx$ 32 %)	Li^+, –2.50 ± 0.11; Rb^+, –3.05 ± 0.05; Cs^+, –3.30 ± 0.02; Mg^{2+}, –3.61 ± 0.03; Ca^{2+}, –3.54 ± 0.08; K^+, –1.85 ± 0.10	FIM	–	0.1	N	–	ISFET; interlayer: poly (12-hydroxyethyl methacrylate)	[8]
			FIM	–	0.01				
Na^+-13	**Na^+-13** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 57 %), PVC (w = 33.33 %)	K^+, –0.4; Rb^+, –1.0; Cs^+, –0.5; H^+, –0.5; Mg^{2+}, –0.6; Ca^{2+}, –0.4; Sr^{2+}, –0.6; Ba^{2+}, –1.1	SSM	–	–	46.1	$10^{-4.4}$ –$10^{-1.9}$	25 °C; $c_{dl} = 10^{-4.4}$ M; τ = 30 d; t_{resp} < 2 s	[14]
Na^+-14	**Na^+14** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 61 %), PVC (w = 33.33 %)	Li^+, –0.6; K^+, –0.8; Rb^+, –1.1; Cs^+, –1.5; NH_4^+, –0.2; H^+, –0.3; Be^{2+}, –0.8; Mg^{2+}, –1.4; Ca^{2+}, –0.4; Sr^{2+}, –0.5; Ba^{2+}, –0.9	SSM	–	–	43.6	–	c_{dl} = $10^{-3.5}$ M; 25 °C; τ = 60 d; t_{resp} < 2 s	[14]
Na^+-15	**Na^+-15** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.3–2.1 %), PVC (w = 24.3–20.3 %)	K^+, –1.70; H^+, –3.40	FIM	–	0.05	–	–	25.0 ± 0.1 °C;	[2]
	Na^+15 (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 57 %), PVC (w = 33.33 %)	Li^+, –2.1; K^+, –1.4 Rb^+, –0.2; Cs^+, –2.9; NH_4^+, –2.7; H^+, –2.3; Be^{2+}, –2.8; Mg^{2+}, –5.4; Ca^{2+}, –3.4; Sr^{2+}, –5.9; Ba^{2+}, –3.0	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-16	**Na^+16** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 56 %), PVC (w = 33.33 %)	Li^+, –3.1; K^+, –1.3; Rb^+, –3.4; Cs^+, –3.1; NH_4^+, –2.9; H^+, –4.1; Be^{2+}, –4.9; Mg^{2+}, –5.3; Ca^{2+}, –4.9; Sr^{2+}, –4.7; Ba^{2+}, –4.6	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-17	**Na^+-17** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (w = 0.17 %), PVC (w = 33.33 %)	Li^+, –2.4; K^+, –0.9; Rb^+, –1.4; Cs^+, –1.2; NH_4^+, –1.8; H^+, –2.2; Be^{2+}, –3.1; Mg^{2+}, –2.8; Ca^{2+}, –3.0; Sr^{2+}, –2.5; Ba^{2+}, –4.6	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-18	**Na^+-18** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 69 %), PVC (w = 33.33 %)	Li^+, –2.8; K^+, –1.5; Pb^+, –2.4; Cs^+, –2.3; NH_4^+, –3.1; H^+, –2.7; Be^{2+}, –3.3; Mg^{2+}, –3.2; Ca^{2+}, –3.1; Sr^{2+}, –2.5; Ba^{2+}, –3.1	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-19	**Na^+-19** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 53 %), PVC (w = 33.33 %)	Li^+, –0.8; K^+, +0.7; Rb^+, +1.0; Cs^+, +0.9; NH_4^+, –0.5; H^+, –0.5; Be^{2+}, –1.3; Mg^{2+}, –1.4; Ca^{2+}, –1.8; Sr^{2+}, –1.4; Ba^{2+}, –1.2	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-20	**Na^+-20** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 51 %), PVC (w = 33.33 %)	Li^+, –1.8; K^+, +0.5; Rb^+, –1.8; Cs^+, –1.7; NH_4^+, –1.8; H^+, –3.0; Be^{2+}, –2.9; Mg^{2+}, –3.5; Ca^{2+}, –3.4; Sr^{2+}, –3.4; Ba^{2+}, –3.4	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-21	**Na^+-21** (w = 0.66 %), oNPOE (w = 65.84 %), KTpClPB (x_i = 53 %), PVC (w = 33.33 %)	Li^+, –1.3; K^+, +1.2; Rb^+, +1.5; Cs^+, +2.1; NH_4^+, +0.4; H^+, –0.3; Be^{2+}, –1.6; Mg^{2+}, –1.5; Ca^{2+}, –1.5; Sr^{2+}, –1.8; Ba^{2+}, –0.8	SSM	–	–	–	–	25 °C; t_{resp} < 2 s	[14]
Na^+-22	**Na^+-22** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 5.9–2.0 %), PVC (w = 24.3–20.3 %)	Li^+, –3.40; K^+, –2.51; H^+, –3.75;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.26; Mg^{2+}, –4.62; Ca^{2+}, –4.10	FIM	–	0.5				
Na^+-23	**Na^+-23** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.3–2.1 %), PVC (w = 24.3–20.3 %)	Li^+, –3.36; K^+, –2.49; H^+, –3.55;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.20; Mg^{2+}, –4.69; Ca^{2+}, –4.06	FIM	–	0.5				
Na^+-24	**Na^+-24** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.9–2.3 %), PVC (w = 24.3–20.3 %)	Li^+, –3.49; K^+, –2.57; H^+, –4.00;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.27; Mg^{2+}, –4.96; Ca^{2+}, –4.14	FIM	–	0.5				

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-24 (w = 9.7–24.4 %), oNPOE (w = 65.5–54.9 %), NaTFPB (x_i = 6.9–2.3 %), PVC (w = 24.3–20.3 %)	Li^+, –3.40; K^+, –2.38; H^+, –3.18;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.40; Mg^{2+}, –4.35; Ca^{2+}, –3.78	FIM	–	0.5				
	Na^+-24 (w = 9.7–24.4 %), FNDPE (w = 65.5–54.9 %), NaTFPB (x_i = 6.9–2.3 %), PVC (w = 24.3–20.3 %)	Li^+, –3.02; K^+, –2.07; H^+, –3.64;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –4.06; Mg^{2+}, –4.57; Ca^{2+}, –4.11	FIM	–	0.5	–	–		
Na^+-25	**Na^+-25** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.1–2.0 %), PVC (w = 24.3–20.3 %)	Li^+, –3.30; K^+, –1.92; H^+, –3.49;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –3.93; Mg^{2+}, –4.76; Ca^{2+}, –4.09	FIM	–	0.5				
	Na^+-25 (w = 9.7–24.4 %), oNPOE (w = 65.5–54.9 %), NaTFPB (x_i = 6.1–2.0 %), PVC (w = 24.3–20.3 %)	Li^+, –3.08; K^+, –1.85; H^+, –2.94;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –3.36; Mg^{2+}, –4.10; Ca^{2+}, –3.67	FIM	–	0.5				
	Na^+-25 (w = 9.7–24.4 %), FNDPE (w = 65.5–54.9 %), NaTFPB (x_i = 6.1–2.0 %), PVC (w = 24.3–20.3 %)	Li^+, –2.79; K^+, –1.76; H^+, –2.03;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –3.06; Mg^{2+}, –3.49; Ca^{2+}, –3.43	FIM	–	0.5				
Na^+-26	**Na^+-26** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.3–2.1 %), PVC (w = 24.3–20.3 %)	Li^+, –3.15; K^+, –2.20; H^+, –2.58;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		NH_4^+, –3.63; Mg^{2+}, –3.82; Ca^{2+}, –3.24	FIM	–	0.5				
Na^+-27	**Na^+-27** (w = 9.7–24.4 %), DOP (w = 65.5–54.9 %), NaTFPB (x_i = 6.3–2.1 %), PVC (w = 24.3–20.3 %)	Li^+, –3.29; K^+, –1.67; H^+, –2.76;	FIM	–	0.05	–	–	25.0 ± 0.1 °C	[2]
		Ca^{2+}, –3.67	FIM	–	0.5				
Na^+-28	**Na^+-28** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 21 %), PVC (w = 32.1 %)	Li^+, –1.8; K^+, –3.15; Rb^+, –2.2; Cs^+, –1.1; NH_4^+, –3.85; H^+, –4.2; Mg^{2+}, –3.65; Ca^{2+}, –4.2; Sr^{2+}, –4.1; Ba^{2+}, –4.8	–	–	–	> 57	–	25 °C; $c_{dl} = 1.0 \times 10^{-4}$ M; r.o.o.g.	[15]
Na^+-29	**Na^+-29** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 26 %),	Li^+, –1.75; K^+, –3.2; Rb^+, –2.35; Cs^+, –1.5; NH_4^+, –3.8; H^+, –4.5;	–	–	–	> 57	–	25 °C; $c_{dl} = 1.0 \times 10^{-4}$ M;	[15]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	PVC (w = 32.1 %)	Mg^{2+}, –3.7; Ca^{2+}, –4.2 Sr^{2+}, –4.05; Ba^{2+}, –4.7						r.o.o.g.	
Na^+-30	**Na^+-30** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 30 %), PVC (w = 32.1 %)	Li^+, –1.8; K^+, –3.5; Rb^+, –3.6; Cs^+, –2.8; NH_4^+, –3.9; H^+, –4.7; Mg^{2+}, –4.5; Ca^{2+}, –4.1; Sr^{2+}, –4.1; Ba^{2+}, –4.7	–	–	–	> 57	–	25 °C; c_{dl} = 1.0 × 10^{-4} M; r.o.o.g.	[15]
	Na^+-30 (w = 3.2 %), FNDPE (w = 64.1 %), KTpClPB (x_i = 30 %), PVC (w = 32.1 %)	Li^+, –1.8; K^+, –3.6; Rb^+, –3.8; Cs^+, –3.1; NH_4^+, –3.9; H^+, –5.0; Mg^{2+}, –4.5; Ca^{2+}, –4.1; Sr^{2+}, –4.0; Ba^{2+}, –4.8	–	–	–	> 57	–	25 °C; c_{dl} = 1.0 × 10^{-4} M; r.o.o.g.	[15]
Na^+-31	**Na^+-31** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 22 %), PVC (w = 32.1 %)	Li^+, –2.0; K^+, –3.5; Rb^+, –3.6; Cs^+, –2.6; NH_4^+, –3.9; H^+, –4.0; Mg^{2+}, –4.3; Ca^{2+}, –4.1 Sr^{2+}, –4.1; Ba^{2+}, –4.6	–	–	–	> 57	–	25 °C; c_{dl} = 1.0 × 10^{-4} M; r.o.o.g.	[15]
Na^+-32	**Na^+-32** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 13 %), PVC (w = 32.0 %)	Rb^+, +0.06; Cs^+, –0.48; NH_4^+, –0.94; Mg^{2+}, –3.36; Ca^{2+}, –2.49; Sr^{2+}, –2.22; Ba^{2+}, –2.62	FIM	– – – –	0.02 or 0.01 0.10 or 0.50 1.0 0.5		–	24–25 °C	[16]
	Na^+-32 (w = 3.2 %), KTpClPB (x_i = 13 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.48 ± 0.03; K^+, +0.42 ± 0.04	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-33	**Na^+-33** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 15 %), PVC (w = 32.0 %)	Rb^+, –0.29; Cs^+, –0.88; NH_4^+, –1.48; Mg^{2+}, –3.53; Ca^{2+}, –2.88; Sr^{2+}, –2.50; Ba^{2+}, –2.59	FIM	– – – –	0.02 or 0.01 0.10 or 0.50 1.0 0.5		–	24–25 °C	[16]
	Na^+-33 (w = 3.2 %), KTpClPB (x_i = 15 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.08 ± 0.07; K^+, +0.07 ± 0.03	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-34	**Na^+-34** (w = 3.2 %), oNPOE (w = 64.1 %),	Li^+, –3.23; K^+, –0.46;	FIM	– –	0.10 or 0.05 0.01 or 0.05		–	24–25 °C	[16]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	KTpClPB (x_i = 16 %), PVC (w = 32.0 %)	Rb^+, –0.81; Cs^+, –1.49; NH_4^+, –1.93; Mg^{2+}, –3.67; Ca^{2+}, –3.20; Sr^{2+}, –2.62; Ba^{2+}, –3.08		–	0.02 or 0.10				
				–	0.10 or 0.50				
				–	1.0				
				–	0.50				
Na^+-35	**Na^+-35** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 17 %), PVC (w = 32.0 %)	Rb^+, –0.88; Cs^+, –1.46; NH_4^+, –1.97; Mg^{2+}, –3.81; Ca^{2+}, –3.40; Sr^{2+}, –2.63; Ba^{2+}, –2.56	FIM	–	0.02 or 0.10		–	24–25 °C	[16]
				–	0.10 or 0.50				
				–	1.0				
				–	0.50				
	Na^+-35 (w = 3.2 %), KTpClPB (x_i = 17 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.87 ± 0.04; K^+, –0.05 ± 0.04	FIM	–	0.1 or 0.5	59	–	24–25 °C	[17]
				–	0.05 or 0.01				
Na^+-36	**Na^+-36** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 18 %), PVC (w = 32.0 %)	Rb^+, –1.42; Cs^+, –2.05; NH_4^+, –2.11; Mg^{2+}, –3.76; Ca^{2+}, –2.90; Sr^{2+}, –2.31; Ba^{2+}, –1.40	FIM	–	0.02 or 0.10		–	24–25 °C	[16]
				–	0.10 or 0.50				
				–	1.0				
				–	0.50				
	Na^+-36 (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.02 ± 0.06; K^+, –0.79 ± 0.03	FIM	–	0.1 or 0.5	59	–	24–25 °C	[17]
				–	0.05 or 0.01				
Na^+-37	**Na^+-37** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 22 %), PVC (w = 32.0 %)	Rb^+, –1.48; Cs^+, –2.18; NH_4^+, –2.13; Mg^{2+}, –3.88; Ca^{2+}, –3.19; Sr^{2+}, –2.41; Ba^{2+}, –1.56	FIM	–	0.02 or 0.10		–	24–25 °C	[16]
				–	0.10 or 0.50				
				–	1.0				
				–	0.50				
	Na^+- 37 (w = 3.2 %), KTpClPB (x_i = 22 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.14 ± 0.02; K^+, –0.98 ± 0.013	FIM	–	0.01	–	–	24–25 °C	[18]
				–	0.05				
Na^+-38	**Na^+-38** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 16 %), PVC (w = 32.0 %)	Rb^+, –0.35; Cs^+, –1.08; NH_4^+, –1.68; Mg^{2+}, –3.73; Ca^{2+}, –3.25; Sr^{2+}, –2.53; Ba^{2+}, –3.09	FIM	–	0.02 or 0.10		–	24–25 °C	[16]
				–	0.10 or 0.50				
				–	1.0				
				–	0.50				

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-38 (w = 3.2 %), KTpClPB (x_i = 16 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.99 ± 0.02; K^+, –0.34 ± 0.03	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-39	**Na^+-39** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 18 %), PVC (w = 32.0 %)	Li^+, –3.49; K^+, +1.34 Rb^+, –1.96; Cs^+, –2.53; NH_4^+, –3.03; Mg^{2+}, –3.81; Ca^{2+}, –3.78; Sr^{2+}, –2.62; Ba^{2+}, –3.63	FIM	– – – –	0.01 or 0.05 0.02 or 0.10 0.10 or 0.50 1.0 0.50		–	24–25 °C	[16]
Na^+-40	**Na^+-40** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 19 %), PVC (w = 32.0 %)	Rb^+, –2.16; Cs^+, –2.61; NH_4^+, –3.20; Mg^{2+}, –3.80; Ca^{2+}, –3.84; Sr^{2+}, –2.70; Ba^{2+}, –3.18	FIM	– – – –	0.02 or 0.10 0.10 or 0.50 1.0 0.50		–	24–25 °C	[16]
	Na^+-40 (w = 3.2 %), KTpClPB (x_i = 18 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.74; K^+, –1.36	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-41	**Na^+-41** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 20 %), PVC (w = 32.0 %)	Rb^+, –2.62; Cs^+, –3.07; NH_4^+, –3.02; Mg^{2+}, –3.83; Ca^{2+}, –3.55; Sr^{2+}, –2.66; Ba^{2+}, –2.76	FIM	– – – –	0.02 or 0.10 0.10 or 0.50 1.0 0.50		–	24–25 °C	[16]
Na^+-42	**Na^+-42** (w = 3.2 %), oNPOE (w = 64.1 %), KTpClPB (x_i = 23 %), PVC (w = 32.0 %)	Rb^+, –2.77; Cs^+, –3.18; NH_4^+, –3.12; Mg^{2+}, –3.85; Ca^{2+}, –3.63; Sr^{2+}, –2.71; Ba^{2+}, –2.68	FIM	– – – –	0.02 or 0.10 0.10 or 0.50 1.0 0.50		–	24–25 °C	[16]
	Na^+-42 (w = 3.2 %), KTpClPB (x_i = 24 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	K^+, –2.13 ± 0.01* Li^+, –2.91 ± 0.04;* Rb^+, –2.9; Cs^+, –3.3; H^+, –2.7; Mg^{2+}, –4.0; NH_4^+, –3.2; Ca^{2+}, –3.8; Sr^{2+}, –2.8; Ba^{2+}, –2.8	FIM	– – – –	0.05 0.01 1.0 0.5	–	–	24–25 °C; r.o.o.g.; * numerical data	[18]
	Na^+-42 (w = 3.2 %), KTpClPB (x_i = 24 %), DBE (w = 64.1 %),	K^+, –1.9; Li^+, –3.0; Rb^+, –2.7; Cs^+, –3.2; H^+, –2.7;	FIM	– –	0.05 0.01	–	–	24–25 °C; r.o.o.g.	[18]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	PVC (w = 32.0 %)	Mg^{2+}, –3.7; NH_4^+, –3.0; Ca^{2+}, –3.9; Sr^{2+}, –2.7; Ba^{2+}, –3.3		– –	1.0 0.5				
	Na^+-42 (w = 3.2 %), KTpClPB (x_i = 24 %), DOS (w = 64.1 %), PVC (w = 32.0 %)	K^+, –1.90 Li^+, –3.1; Rb^+, –2.7; Cs^+, –3.2; H^+, –2.9; Mg^{2+}, –3.9; NH_4^+, –3.1; Ca^{2+}, –3.9; Sr^{2+}, –2.9; Ba^{2+}, –3.2	FIM	– – – –	0.05 0.01 1.0 0.5	–	–	24–25 °C; r.o.o.g.	[18]
	Na^+-42 (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.84 ± 0.01; K^+, –1.98 ± 0.02	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-43	**Na^+-43** (w = 0.9 %), BBPA (w = 67.4 %), PVC (w = 31.7 %)	K^+, –1.43	SSM	0.01	0.01	53.0	–	25 ± 0.5 °C; $c_{dl} = 4.0 \times 10^{-6}$ M; FIA	[20]
	Na^+-43 (w = 0.9 %), BEHS (w = 67.4 %), PVC (w = 31.7 %)	K^+, –0.81	SSM	0.01	0.01	52.0	–	25 ± 0.5 °C; $c_{dl} = 1.8 \times 10^{-6}$ M; FIA	[20]
	Na^+-43 (w = 0.9 %), DOS (w = 67.4 %), PVC (w = 31.7 %)	Li^+, –2.93; K^+, –1.38; Mg^{2+}, –3.96; Ca^{2+}, –4.06	SSM	0.01	0.01	60.0	–	25 ± 0.5 °C; $c_{dl} = 1.3 \times 10^{-6}$ M; FIA	[20]
	Na^+-43 (w = 0.9 %), oNPOE (w = 67.4 %), PVC (w = 31.7 %)	Li^+, –2.40; K^+, –1.74; Mg^{2+}, –3.94; Ca^{2+}, –3.88	SSM	0.01	0.01	60.8	–	25 ± 0.5 °C; $c_{dl} = 6.3 \times 10^{-6}$ M; FIA	[20]
	Na^+-43 (w = 0.9 %), oNPOE (w = 67.2 %), KTpClPB (x_i = 50 %), PVC (w = 31.7 %)	Li^+, –1.80; K^+, –1.85; Mg^{2+}, –3.15; Ca^{2+}, –3.68	SSM	0.01	0.01	61.0	–	25 ± 0.5 °C; $c_{dl} = 6.0 \times 10^{-6}$ M; FIA	[20]
	Na^+-43 (membrane composition not reported)	Li^+, –3.7; K^+, –1.9; NH_4^+, –3.0; Ca^{2+}, –4.2 $N(CH_3)_4^+$, –2.3; $N(C_4H_{11})_4^+$, +2.1; $N(CH_3)_3(C_{18}H_{37})^+$, +3.9	SSM	–	0.1	55–57	5×10^{-5}–1.0	25 °C; t_{90} = 10 s; τ > 120 d	[21]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-43, DOA, PVC (weight ratio not reported)	Li^+, –3.8; K^+, –1.7; Rb^+, –2.0; Cs^+, –2.2; NH_4^+, –2.7; Ca^{2+}, –4.3; Sr^{2+}, –4.5; Mg^{2+}, –4.2; Ba^{2+}, –4.1	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 5 %), DOA, PVC (weight ratio not reported)	Li^+, –3.6; K^+, –1.8; Rb^+, –2.1; Cs^+, –2.4; NH_4^+, –2.9; Ca^{2+}, –3.2; Sr^{2+}, –4.4; Mg^{2+}, –3.4; Ba^{2+}, –3.7	SSM	–	0.05	55	5×10^{-5}–1	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 15 %), DOA, PVC (weight ratio not reported)	Li^+, –4.0; K^+, –1.8; Rb^+, –2.0; Cs^+, –2.3; NH_4^+, –2.8; Ca^{2+}, –4.0; Sr^{2+}, –4.2; Mg^{2+}, –4.2; Ba^{2+}, –3.4	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 20 %), DOA, PVC (weight ratio not reported)	Li^+, –3.5; K^+, –1.7; Rb^+, –2.0; Cs^+, –2.3; NH_4^+, –2.8; Ca^{2+}, –4.0; Sr^{2+}, –4.0; Mg^{2+}, –4.3; Ba^{2+}, –3.3	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 30 %), DOA, PVC (weight ratio not reported)	Li^+, –3.4; K^+, –1.7; Rb^+, –1.9; Cs^+, –2.2; NH_4^+, –2.7; Ca^{2+}, –3.8; Sr^{2+}, –3.7; Mg^{2+}, –4.1; Ba^{2+}, –3.1	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 45 %), DOA, PVC (weight ratio not reported)	Li^+, –3.2; K^+, –1.4; Rb^+, –1.7; Cs^+, –1.9; NH_4^+, –2.3; Ca^{2+}, –3.5; Sr^{2+}, –3.4; Mg^{2+}, –3.8; Ba^{2+}, –2.7	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB (x_i = 75 %), DOA, PVC (weight ratio not reported)	Li^+, –2.2; K^+, –0.6; Rb^+, –0.8; Cs^+, –1.0; NH_4^+, –1.5; Ca^{2+}, –2.4; Sr^{2+}, –2.3; Mg^{2+}, –2.9; Ba^{2+}, –1.4	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-43, NaTFPB (x_i = 94 %), DOA, PVC (weight ratio not reported)	Li^+, –0.5; K^+, +0.6; Rb^+, +0.5; Cs^+, +0.5; NH_4^+, +0.1; Ca^{2+}, –1.0; Sr^{2+}, –0.8; Mg^{2+}, –1.5; Ba^{2+}, +0.3	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB, DOS, PVC (weight ratio not reported)	Li^+, –3.5; K^+, –1.7; Rb^+, –1.9; Cs^+, –2.1; NH_4^+, –2.6; Ca^{2+}, –4.2; Sr^{2+}, –4.4; Mg^{2+}, –4.0; Ba^{2+}, –4.1	SSM	–	0.05	56	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB, DBS, PVC (weight ratio not reported)	Li^+, –3.5; K^+, –1.8; Rb^+, –1.9; Cs^+, –2.1; NH_4^+, –2.7; Ca^{2+}, –4.2; Sr^{2+}, –4.5; Mg^{2+}, –4.2; Ba^{2+}, –4.2	SSM	–	0.05	56	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB, DPP, PVC (weight ratio not reported)	Li^+, –3.6; K^+, –2.0; Rb^+, –2.2; Cs^+, –2.5; NH_4^+, –3.1; Ca^{2+}, –4.9; Sr^{2+}, –5.2; Mg^{2+}, –4.8; Ba^{2+}, –4.7	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB, TEHP, PVC (weight ratio not reported)	Li^+, –1.5; K^+, –1.9; Rb^+, –1.8; Cs^+, –2.1; NH_4^+, –1.7; Ca^{2+}, –2.4; Sr^{2+}, –3.1; Mg^{2+}, –3.3; Ba^{2+}, –2.8	SSM	–	0.05	55	5×10^{-5}–1.0	r.o.o.g.	[22]
	Na^+-43, NaTFPB, oNPOE, PVC (weight ratio not reported)	Li^+, –2.6; K^+, –1.9; Rb^+, –2.1; Cs^+, –2.2; NH_4^+, –2.2; Ca^{2+}, –3.7; Sr^{2+}, –3.1; Mg^{2+}, –3.0; Ba^{2+}, –2.9	SSM	–	0.05	46	5×10^{-4}–1.0	r.o.o.g.	[22]
		Li^+, –3.6;* K^+, –2.1;* Rb^+, –2.4*; Cs^+, –3.2;* NH_4^+, –3.2;* Ca^{2+}, –3.7;* Sr^{2+}, –4.1;* Mg^{2+}, –3.9;* Ba^{2+}, –3.8*	SSM	–	0.05	46*	5×10^{-4}–1.0*	* after 3.5 d in 4 M NaCl; r.o.o.g.	
	Na^+-43 (w = 2.8 %),	Li^+, –3.4; K^+, –1.90;	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Rb^+, –2.3; Cs^+, –2.6; H^+, –3.4; NH_4^+, –3.3; Ca^{2+}, –3.3; Mg^{2+}, –4.4	FIM	–	0.5				
Na^+-44	**Na^+-44** (w = 10 %), silicone rubber (w = 90 %)	K^+, –2.5; H^+, –3.15; Li^+, –3.1; Mg^{2+}, –3.5; Ca^{2+}, –3.9; NH_4^+, –4.15	FIM	– – –	0.1 0.5 0.8	N	–	ISFET; t_{90} = 1 s; r.o.o.g.	[6]
	Na^+-44 (w = 10 %), silicone rubber (w = 90 %)	K^+, –2.4; H^+, –3.6; Li^+, –2.8; Mg^{2+}, –3.5; Ca^{2+}, –3.9; NH_4^+, –4.2	FIM	– – –	0.1 0.5 1.0	N	3×10^{-5}– 6×10^{-1}	r.o.o.g	[24]
	Na^+-44 (w = 6.3 %), DOS (w = 62.5 %), PVC (w = 31.2 %)	K^+, –2.37; H^+, –3.06; Li^+, –3.5; Mg^{2+}, –3.87; Ca^{2+}, –4.25; NH_4^+, –4.06	FIM	– – –	0.1 0.5 1.0	N	–	r.o.o.g.	[24]
Na^+-45	**Na^+-45** (w = 10 %), silicone rubber (w = 90 %)	K^+, –2.0; H^+, –0.95; Li^+, –2.9; Mg^{2+}, –3.4; Ca^{2+}, –3.7; NH_4^+, –2.7	FIM	– – –	0.1 0.5 0.8	N	–	ISFET; t_{90} = 1 s; r.o.o.g.	[6]
Na^+-46	**Na^+-46** (w = 1.0 %), KTFPB (x_i = 49.8 %), oNPOE (w = 65.6 %), PVC (w = 32.8 %)	Li^+, – 0.2; K^+, –0.7; Rb^+, –1.4; Cs^+, –1.3; NH_4^+, –1.7; H^+, –2.4; Mg^{2+}, –3.5; Ca^{2+}, –2.9; Sr^{2+}, –2.7; Ba^{2+}, –1.9	SSM	0.1	0.1	53.6 ± 0.2	–	22 ± 1 °C; r.o.o.g.	[25]
	Na^+-46 (w = 1.0 %), KTFPB (x_i = 10.1 %), oNPOE (w = 65.1 %), PVC (w = 32.6 %)	Li^+, –0.6; K^+, –1.2; Rb^+, –2.0; Cs^+, –2.3; NH_4^+, –2.3; H^+, –2.95; Mg^{2+}, –3.9; Ca^{2+}, –3.3; Sr^{2+}, –3.1; Ba^{2+}, –1.4	SSM	0.1	0.1	59.6 ± 0.9	–	22 ± 1 °C; r.o.o.g	[25]
	Na^+-46 (w = 1.1 %), oNPOE (w = 65.9 %), PVC (w = 33.0 %)	Li^+, –0.7; K^+, –1.1; Rb^+, –1.6; Cs^+, –1.8; NH_4^+, –0.85; H^+, +2.20; Mg^{2+}, –1.9; Ca^{2+}, –2.1; Sr^{2+}, –1.7; Ba^{2+}, –1.0	SSM	0.1	0.1	28.5 ± 2.0	–	22 ± 1 °C; r.o.o.g.	[25]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$lgK_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-46 (w = 3 %), KTpClPB (x_i = 45 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –1.2; K^+, –1.2; Rb^+, –2.0; Cs^+, –2.4; Mg^{2+}, –2.8; Ca^{2+}, –2.7; Sr^{2+}, –2.5; Ba^{2+}, –0.8	SSM	0.1	0.1	–	–	pH = 6.00; r.o.o.g.	[26]
		Li^+, +0.1; K^+, –0.1; Rb^+, –0.7; Cs^+, –1.0; Mg^{2+}, –2.8; Ca^{2+}, –1.1; Sr^{2+}, –0.2; Ba^{2+}, +1.0	SSM	0.1	0.1	–	–	pH = 8.00; r.o.o.g.	[26]
Na^+-47	**Na^+-47** (w = 3.2 %), KTpClPB (x_i = 0.05 %), DOS (w = 63.2 %), PVC (w = 31.6 %)	K^+, –4.9 ± 0.1; Mg^{2+}, –8.0 ± 0.1; Ca^{2+}, –7.7 ± 0.1	–	–	–	61.3 ± 1.5	–	21.5 ± 0.5 °C; conditioned in 0.01 M KCl; *conditioned in 0.01 M NaCl	[27]
		K^+, –3.5 ± 0.1;* Mg^{2+}, –4.5 ± 0.1;* Ca^{2+}, –4.2 ± 0.1*	–	–	–	59.5 ± 0.1*	–		
Na^+-48	**Na^+-48** (w = 2.2 %), KTpClPB (x_i = 20 %), aromatic epoxyacrylate (w = 45.3 %), copolymerizable benzophenone photoinitiator (w = 5.6 %), bis(2-ethylhexyl) phtalate (w = 23.9 %), 1,6-hexanediyl diacrylate (w = 22.6 %)	Li^+, –1.9; K^+, –0.4; NH_4^+, –1.5; Mg^{2+}, –2.9; Ca^{2+}, –1.7; Sr^{2+}, –2.2; Ba^{2+}, –0.4	FIM	–	–	58.3 ± 0.8	10^{-4}–10^{-1}	photopolymerised membranes; $c_{dl} = 2 \times 10^{-5}$ M; $t_{90} < 5$ s; r.o.o.g.	[28] FIA;
	Na^+-48 (membrane composition not reported)	Li^+, –1.8; K^+, –0.4; NH_4^+, –0.9; Ca^{2+}, –3.0 $N(CH_3)_4^+$, –1.6; $N(C_4H_{11})_4^+$, +3.1; $N(CH_3)_3(C_{18}H_{37})^+$, +4.7	SSM	–	0.1	54–56	5×10^{-4}–1.0	25 °C; t_{90} = 10 s; τ > 120 d	[21]
Na^+-49	**Na^+-49** (w = 4.2 %), NaTPB (x_i = 25 %), oNPOE (w = 63.3 %), PVC (w = 31.6 %)	Li^+, –1.3; K^+, –2.1; Rb^+, –1.8; Cs^+, –1.7; NH_4^+, –2.6; H^+, –2.8; Mg^{2+}, –3.9; Ca^{2+}, –2.4; Sr^{2+}, –3.6; Ba^{2+}, –3.6; Al^{3+}, –2.4; Cd^{2+}, –3.1; Cu^{2+}, –2.9; Co^{2+}, –3.2; Ni^{2+}, –3.1; Zn^{2+}, –3.3; Fe^{3+}, –3.3	SSM	–	–	58 ± 0.3	10^{-5}–10^{-1}	c_{dl} = 7×10^{-6} M; 2.0 < pH < 10.0; r.o.o.g.	[29]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-50	**Na^+-50** (w = 4.2 %), NaTPB (x_i = 27 %), oNPOE (w = 63.3 %), PVC (w = 31.6 %)	Li^+, –2.0; K^+, –0.7; Rb^+; –1.3; Cs^+, –0.9 NH_4^+, –2.2; H^+, –2.7; Mg^{2+}, –3.0; Ca^{2+}, –2.5; Sr^{2+}, –2.9; Ba^{2+}, –2.4; Al^{3+}, –1.5; Cd^{2+}; –3.2; Cu^{2+}, –3.2; Co^{2+}, –3.4; Zn^{2+}, –2.9; Mo^{2+}, –3.3; Fe^{3+}, –2.6	SSM	–	–	58 ± 0.3		c_{dl} = 7×10^{-6} M; r.o.o.g.; 2.0 < pH < 10.0	[29]
Na^+-51	**Na^+-51** (w = 4.2 %), NaTPB (x_i = 33 %), oNPOE (w = 63.2 %), PVC (w = 31.6 %)	Li^+, –2.5; K^+, –0.8; Rb^+; +1.1; Cs^+, +0.4; NH_4^+, –0.1; Mg^{2+}, –2.8; Ca^{2+}, –2.0; Sr^{2+}, –2.5; Ba^{2+}, –1.9; Al^{3+}, –2.6; Cd^{2+}, –2.7; Cu^{2+}, –2.8; Co^{2+}, –3.1; Ni^{2+}, –1.3; Zn^{2+}, –3.3; Mo^{2+}, –3.0; Fe^{3+}, –3.2	SSM	–	–	58 ± 0.3	–	c_{dl} = 7×10^{-6} M; 2.0 < pH < 10.0; r.o.o.g.	[29]
Na^+-52	**Na^+-52** (w = 9.0 %), KTpClPB (x_i = 1.5 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, +0.8 Li^+, –1.5; Rb^+; +0.6; Cs^+, +1.8; H^+, –2.0; NH_4^+, –0.3; Mg^{2+}, –3.2; Ca^{2+}, –2.8	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-53	**Na^+-53** (w = 9.0 %), KTpClPB (x_i = 1.8 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –0.95 Li^+, –2.4; Rb^+; –1.2; Cs^+, –1.0; H^+, –3.1; NH_4^+, –2.1; Mg^{2+}, –4.1; Ca^{2+}, –3.4	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-54	**Na^+-54** (w = 9.0 %), KTpClPB (x_i = 2.2 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –1.0; Rb^+; –0.9; Li^+, –2.0; Cs^+, –1.0; H^+, –3.8; NH_4^+, –1.9; Mg^{2+}, –3.9; Ca^{2+}, –3.7	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-55	**Na^+-55** (w = 9.0 %), KTpClPB (x_i = 2.9 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –0.92; Rb^+; –1.3; Li^+, –2.6; Cs^+, –0.95; H^+, –3.7; NH_4^+, –2.1; Mg^{2+}, –3.9; Ca^{2+}, –3.4	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-56	**Na^+-56** (w = 9.0 %), KTpClPB (x_i = 1.8 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –0.73; Rb^+; –1.1; Li^+, –2.5; Cs^+, –0.8; H^+, –3.1; NH_4^+, –2.1; Mg^{2+}, –3.9; Ca^{2+}, –3.5	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-57	**Na^+-57** (w = 9.0 %), KTpClPB (x_i = 2.2 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –0.90; Rb^+, –1.2; Li^+, –2.4; Cs^+, –0.9; H^+, –3.05; NH_4^+, –2.05; Mg^{2+}, –3.8; Ca^{2+}, –3.3	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-58	**Na^+-58** (w = 9.0 %), KTpClPB (x_i = 2.6 %), oNPOE (w = 60.5 %), PVC (w = 30.2 %)	K^+, –0.95; Rb^+, –0.8; Li^+, –1.85; Cs^+, –0.8; H^+, –3.5; NH_4^+, –1.75; Mg^{2+}, –3.9; Ca^{2+}, –3.6	FIM SSM	– 0.01	0.01 0.01	– –	– –	25 ± 1 °C; r.o.o.g.	[30]
Na^+-59	**Na^+-59** (w = 3 %), KTpClPB (x_i = 46 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –0.6; K^+, –0.8; Rb^+, –1.0; Cs^+, –1.8; Mg^{2+}, –3.6; Ca^{2+}, –3.5; Sr^{2+}, –3.3; Ba^{2+}, –3.1	SSM	0.1	0.1	–	–	r.o.o.g.	[26]
Na^+-60	**Na^+-60** (w = 3 %), KTpClPB (x_i = 47 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –0.5; K^+, –1.1; Rb^+, –1.8; Cs^+, –2.6; Mg^{2+}, –3.8; Ca^{2+}, –3.5; Sr^{2+}, –3.2; Ba^{2+}, –2.8	SSM	0.1	0.1	–	–	r.o.o.g.	[26]
Na^+-61	**Na^+-61** (w = 3 %), KTpClPB (x_i = 49 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –0.4; K^+, –1.1; Rb^+, –1.8; Cs^+, –2.6; Mg^{2+}, –4.3; Ca^{2+}, –4.1; Sr^{2+}, –3.9; Ba^{2+}, –3.6	SSM	0.1	0.1	–	–	r.o.o.g.	[26]
Na^+-62	**Na^+-62** (w = 3 %), KTpClPB (x_i = 51 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –0.7; K^+, –0.7; Rb^+, –1.3; Cs^+, –2.1; Mg^{2+}, –4.3; Ca^{2+}, –4.0; Sr^{2+}, –3.8; Ba^{2+}, –3.5	SSM	0.1	0.1	–	–	r.o.o.g.	[26]
Na^+-63	**Na^+-63** (w = 3 %), KTpClPB (x_i = 56 %), DBE (w = 70 %), PVC (w = 26 %)	Li^+, –0.6; K^+, –01.2 Rb^+, –1.7; Cs^+, –2.5; Mg^{2+}, –4.6; Ca^{2+}, –3.6; Sr^{2+}, –3.6; Ba^{2+}, –3.0	SSM	0.1	0.1	59	–	r.o.o.g.	[26]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-63 (w = 3 %), KTpClPB (x_i = 56 %), BEHS (w = 70 %), PVC (w = 26 %)	Li^+, –0.6; K^+, –0.6; Rb^+, –1.1; Cs^+, –2.8; Mg^{2+}, –4.8; Ca^{2+}, –4.2; Sr^{2+}, –4.1; Ba^{2+}, –3.8	SSM	0.1	0.1	59	–	r.o.o.g.	[26]
	Na^+-63 (w = 3 %), KTpClPB (x_i = 56 %), diisodecyl phosphate (w = 70 %), PVC (w = 26 %)	Li^+, –0.7; K^+, –0.7; Rb^+ –1.2; Cs^+, –2.7; Mg^{2+}, –4.1; Ca^{2+}, –3.6; Sr^{2+}, –3.2; Ba^{2+}, –2.8	SSM	0.1	0.1	59	–	r.o.o.g.	[26]
	Na^+-63 (w = 3 %), KTpClPB (x_i = 56 %), oNPOE (w = 70 %), PVC (w = 26 %)	Li^+, –0.7; K^+, –0.7; Rb^+, –1.4; Cs^+, –2.9; Mg^{2+}, –4.3; Ca^{2+}, –4.0; Sr^{2+}, –3.5; Ba^{2+}, –3.0	SSM	0.1	0.1	59	–	r.o.o.g.	[26]
	Na^+-63 (w = 3 %), KTpClPB (x_i = 56 %), oNPPE (w = 70 %), PVC (w = 26 %)	Li^+, –0.7; K^+, –0.8; Rb^+; –1.3; Cs^+, –2.5; Mg^{2+}, –3.8; Ca^{2+}, –3.2; Sr^{2+}, –3.1; Ba^{2+}, –2.8	SSM	0.1	0.1	59	–	r.o.o.g.	[26]
Na^+-64	**Na^+-64** (w = 10 %), KTpClPB (x_i = 16 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –2.3; K^+, –0.9; Rb^+, –1.1; Cs^+, –1.4; Mg^{2+}, –3.4; Ca^{2+}, –3.2; Sr^{2+}, –3.2; Ba^{2+}, –2.4	SSM	0.1	0.1	–	–	r.o.o.g.	[31]
Na^+-65	**Na^+-65** (w = 10 %), KTpClPB (x_i = 27 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –2.5; K^+, –1.1; Rb^+, –1.3; Cs^+, –1.7; Mg^{2+}, –3.5; Ca^{2+}, –3.2; Sr^{2+}, –3.0; Ba^{2+}, –3.1	SSM	0.1	0.1	–	–	r.o.o.g.	[31]
Na^+-66	**Na^+-66** (w = 10 %), KTpClPB (x_i = 22 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –1.7; K^+, –2.65 Rb^+; –3.1; Cs^+, –2.4; Mg^{2+}, –3.3; Ca^{2+}, –3.0; Sr^{2+}, –2.7; Ba^{2+}, –1.1	SSM	0.1	0.1	54–56	2×10^{-5}–1	r.o.o.g.	[31]
Na^+-67	**Na^+-67** (w = 10 %), KTpClPB (x_i = 23 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –1.8; K^+, –2.75; Rb^+; –3.2; Cs^+, –2.6; Mg^{2+}, –3.7; Ca^{2+}, –3.02; Sr^{2+}, –3.09; Ba^{2+}, –1.3	SSM	0.1	0.1	54–56	2×10^{-5}–1	r.o.o.g.	[31]
Na^+-68	**Na^+-68** (w = 10 %), KTpClPB (x_i = 25 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –1.8; K^+, +0.2; Rb^+, +0.5; Cs^+, –1.1; Mg^{2+}, –3.3; Ca^{2+}, –3.0; Sr^{2+}, –2.8; Ba^{2+}, –1.4	SSM	0.1	0.1	–	–	r.o.o.g.	[31]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-69	**Na^+-69** (w = 10 %), KTpClPB (x_i = 28 %), DBE (w = 60 %), PVC (w = 25 %)	Li^+, –1.8; K^+, +0.6; Rb^+, +0.9; Cs^+, –0.8; Mg^{2+}, –3.1; Ca^{2+}, –3.0; Sr^{2+}, –2.7; Ba^{2+}, –1.4	SSM	0.1	0.1	–	–	r.o.o.g.	[31]
Na^+-70	**Na^+-70** (w = 1.3 %), KTpClPB (x_i = 50 %), oNPOE (w = 65.4 %), PVC (w = 32.8 %)	K^+, –2.63; Mg^{2+}, –3.0; Ca^{2+}, –0.1	FIM	–	0.1	60.5	–	c_{dl} = 10^{-6} M; 37 °C	[32]
Na^+-71	**Na^+-71** (w = 1.3 %), KTpClPB (x_i = 37 %), oNPOE (w = 65.4 %), PVC (w = 32.8 %)	K^+, –0.1; Mg^{2+}, –3.0; Ca^{2+}, –3.1	FIM	–	0.1	50	–	c_{dl} = $10^{-3.5}$ M; 37 °C	[32]
Na^+-72	**Na^+-72** (w = 1.3 %), KTpClPB (x_i = 52 %), oNPOE (w = 65.4 %), PVC (w = 32.8 %)	K^+, –1.5; Mg^{2+}, 0.0; Ca^{2+}, 0.0	FIM	–	0.1	N	–	c_{dl} = $10^{-4.3}$ M; 37 °C	[32]
Na^+-73	**Na^+-73** (w = 1.3 %), KTpClPB (x_i = 39 %), oNPOE (w = 65.4 %), PVC (w = 32.8 %)	K^+, –0.2; Ca^{2+}, –0.8	FIM	1.0	0.1	N	–	c_{dl} = $10^{-4.3}$ M; 37 °C	[32]
Na^+-74	**Na^+-74** (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.31 ± 0.06; K^+, –0.89 ± 0.05	FIM	– –	0.01 0.05	–	–	24–25 °C	[18]
Na^+-75	**Na^+-75** (w = 3.2 %), KTpClPB (x_i = 21 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.21 ± 0.02; K^+, –1.90 ± 0.01	FIM	– –	0.01 0.05	–	–	24–25 °C	[18]
Na^+-76	**Na^+-76** (w = 3.2 %), KTpClPB (x_i = 23 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.02 ± 0.03; K^+, –2.03 ± 0.04	FIM	– –	0.01 0.05	–	–	24–25 °C; r.o.o.g.	[18]
Na^+-77	**Na^+-77** (w = 3.2 %), KTpClPB (x_i = 26 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.85 ± 0.01; K^+, –1.92 ± 0.05	FIM	– –	0.01 0.05	–	–	24–25 °C	[18]
Na^+-78	**Na^+-78** (w = 3.2 %), KTpClPB (x_i = 21 %),	Li^+, –2.89 ± 0.03; K^+, –2.12 ± 0.04	FIM	– –	0.01 0.05	–	–	24–25 °C	[18]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oNPOE (w = 64.1 %), PVC (w = 32.0 %)								
Na^+-79	**Na^+-79** (w = 3.2 %), KTpClPB (x_i = 21 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.01 ± 0.01; K^+, –2.11 ± 0.03	FIM	– –	0.01 0.05	–	–	24–25 °C	[18]
Na^+-80	**Na^+-80** (w = 2.8 %), NaTFPB (x_i = 17 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.4; K^+, –1.91; Rb^+, –2.0; Cs^+, –2.4; H^+, –3.6	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.8; Mg^{2+}, –4.4	FIM	–	0.5				
Na^+-81	**Na^+-81** (w = 2.8 %), NaTFPB (x_i = 19 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.3; K^+, –1.95; Rb^+, –2.3; Cs^+, –2.7; H^+, –4.1	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.4; Ca^{2+}, –3.9; Mg^{2+}, –4.7	FIM	–	0.5				
Na^+-82	**Na^+-82** (w = 2.8 %), NaTFPB (x_i = 17 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.3; K^+, –1.97; Rb^+, –2.3; Cs^+, –2.6; H^+, –3.8	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.8; Mg^{2+}, –4.2	FIM	–	0.5				
Na^+-83	**Na^+-83** (w = 2.8 %), NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.5; K^+, –2.05; Rb^+, –2.4; Cs^+, –2.8; H^+, –4.4	FIM	–	0.05	59	10^{-5}–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.6; Ca^{2+}, –3.9; Mg^{2+}, –4.0	FIM	–	0.5				
Na^+-84	**Na^+-84** (w = 2.8 %), NaTFPB (x_i = 17 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.3; K^+, –1.93; Rb^+, –2.3; Cs^+, –2.6; H^+, –3.7	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.8; Mg^{2+}, –4.5	FIM	–	0.5				
Na^+-85	**Na^+-85** (w = 2.8 %), NaTFPB (x_i = 18 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.2; K^+, –1.92; Rb^+, –2.3; Cs^+, –2.7; H^+, –3.5	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.8; Mg^{2+}, –4.3	FIM	–	0.5				

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-86	**Na^+-86** (w = 2.8 %), NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.4; K^+, –1.97; Rb^+, –2.3; Cs^+, –2.6; H^+, –3.6	FIM	–	0.05	58	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.9; Mg^{2+}, –4.3	FIM	–	0.5				
Na^+-87	**Na^+-87** (w = 2.8 %), NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.4; K^+, –1.93; Rb^+, –2.3; Cs^+, –2.6; H^+, –3.7	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.4; Ca^{2+}, –3.9; Mg^{2+}, –4.4	FIM	–	0.5				
Na^+-88	**Na^+-88** (w = 2.8 %), NaTFPB (x_i = 14 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.1; K^+, –1.5; Rb^+, –1.7; Cs^+, –1.8; H^+, –3.8	FIM	–	0.05	59	10^{-5}–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –2.6; Ca^{2+}, –3.3; Mg^{2+}, –4	FIM	–	0.5				
Na^+-89	**Na^+-89** (w = 2.8 %), NaTFPB (x_i = 14 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –3.6; K^+, –1.7; Rb^+, –2.0; Cs^+, –2.3; H^+, –3.9	FIM	–	0.05	59	10^{-4}–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –3.3; Ca^{2+}, –3.7; Mg^{2+}, –4	FIM	–	0.5				
Na^+-90	**Na^+-90** (w = 2.8 %), NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –2.9; K^+, –1.2; Rb^+, –1.1; Cs^+, –1.4; H^+, –2.6	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –1.4; Ca^{2+}, –2.6; Mg^{2+}, –4	FIM	–	0.5				
Na^+-91	**Na^+-91** (w = 2.8 %), NaTFPB (x_i = 15 %), oNPOE (w = 69.1 %), PVC (w = 27.6 %)	Li^+, –2.1; K^+, –1.5; Rb^+, –1.5; Cs^+, –1.3; H^+, –3.9	FIM	–	0.05	59	$10^{-4.5}$–10^{-1}	25.0 ± 0.1 °C	[23]
		NH_4^+, –2.2; Ca^{2+}, –2.2; Mg^{2+}, –4	FIM	–	0.5				
Na^+-92	**Na^+-92** (w = 2.3 %), KTpClPB (x_i = 50–60 %), BEHS or BBPA ($w \approx$ 65 %), PVC ($w \approx$ 32 %)	Li^+, –1.30 ± 0.02; K^+, –1.48 ± 0.21; Rb^+, –1.75 ± 0.05; Cs^+, –1.98 ± 0.04; Mg^{2+}, –3.34 ± 0.16; Ca^{2+}, –1.38 ± 0.16*	FIM	–	0.01	N	$10^{-4.5}$–10^{-1}	ISFET; interlayer: poly (2-hydroxyethyl methacrylate) * Measurements were made with a membrane matrix composed of PVC and BBPA.	[8]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	Na^+-92 (w = 2.5 %), NaTFB (x_i = 39 %), fluorosilicone rubber (w = 96.9 %)	Li^+, –1.3; K^+, –1.8; Ca^{2+}, –3.0; Mg^{2+}, –3.4	FIM	–	0.01	47.85 ± 3.74	–	$c_{dl} = 2.5 \times 10^{-5}$ M	[33]
				–	0.1				
	Na^+-92 (membrane composition not reported)	Li^+, –1.1; K^+, –1.6 NH_4^+, –1.7; Ca^{2+}, –2.3 $N(CH_3)_4^+$, –2.1; $N(C_4H_{11})_4^+$, +2.9; $N(CH_3)_3(C_{18}H_{37})^+$, +4.7	SSM	–	0.1	55–57	5×10^{-5}–1.0	25 °C; t_{90} = 10 s; τ > 120 d	[21]
Na^+-93	**Na^+-93** (w = 2.5 %), KTpClPB (x_i = 21 %), fluorosilicone rubber (w = 96.9 %)	Li^+, –1.3; K^+, –1.8; Ca^{2+}, –3.0; Mg^{2+}, –3.4	FIM	–	0.01	55.1 ± 0.2	–	$c_{dl} = 1.0 \times 10^{-4}$ M	[33]
				–	0.1				
Na^+-94	**Na^+-94** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.5; K^+, +0.44 Rb^+, +0.8; Cs^+, –0.1; NH_4^+, –0.1; Ca^{2+}, –3.0; Mg^{2+}, –2.6; Sr^{2+}, –3.1; Ba^{2+}, –2.6	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-95	**Na^+-95** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –0.4; K^+, +0.4; Rb^+, +0.4; Cs^+, –0.6; NH_4^+, +0.4; Ca^{2+}, –1.2; Mg^{2+}, –1.9; Sr^{2+}, –1.2; Ba^{2+}, –1.4	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-96	**Na^+-96** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –1.9; K^+, –1.56; Rb^+, –2.0; Cs^+, –2.5; Ca^{2+}, –3.6; Mg^{2+}, –4.9; Sr^{2+}, –4.2; Ba^{2+}, –3.9	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-97	**Na^+-97** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.5; K^+, –2.2; Rb^+, –2.9; Cs^+, –3.2; NH_4^+, –2.8; Ca^{2+}, –3.6; Mg^{2+}, –4.2; Sr^{2+}, –4.1; Ba^{2+}, –4.2	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-98	**Na^+-98** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.6; K^+, –2.1; Rb^+, –2.8; Cs^+, –3.0; NH_4^+, –2.7; Ca^{2+}, –3.7; Mg^{2+}, –4.0; Sr^{2+}, –4.1; Ba^{2+}, –4.0	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
Na^+-99	**Na^+-99** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.3; K^+, –2.2; Rb^+, –2.9; Cs^+, –3.3; NH_4^+, –2.8; Ca^{2+}, –4.2; Mg^{2+}, –4.7; Sr^{2+}, –4.2; Ba^{2+}, –4.3	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-100	**Na^+-100** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –3.0; K^+, –2.4; Rb^+, –3.2; Cs^+, –3.5; NH_4^+, –3.0; Ca^{2+}, –3.7; Mg^{2+}, –3.7; Sr^{2+}, –4.2; Ba^{2+}, –4.2	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %), DBE (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.7; K^+, –2.5; Rb^+, –3.1; Cs^+, –3.5; NH_4^+, –2.7; Ca^{2+}, –4.1; Mg^{2+}, –5.2; Sr^{2+}, –4.2; Ba^{2+}, –4.2	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %), oNPOE (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.6; K^+, –2.2; Rb^+, –2.9; Cs^+, –3.6; NH_4^+, –2.7; Ca^{2+}, –3.9; Mg^{2+}, –5.4; Sr^{2+}, –4.1; Ba^{2+}, –4.4	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %), TEHP (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –3.1; K^+, –3.1; Rb^+, –3.6; Cs^+, –4.0; NH_4^+, –3.3; Ca^{2+}, –4.0; Mg^{2+}, –4.2; Sr^{2+}, –3.9; Ba^{2+}, –4.3	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %), DBE (w = 66.5 %), TEHP (w = 1.4 %), PVC (w = 29.1 %)	Li^+, –2.8; K^+, –2.9; Rb^+, –3.5; Cs^+, –3.8; NH_4^+, –3.2; Ca^{2+}, –4.0; Mg^{2+}, –4.0; Sr^{2+}, –3.7; Ba^{2+}, –4.0	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %), oNPOE (w = 66.5 %), TEHP (w = 1.4 %), PVC (w = 29.1 %)	Li^+, –2.8; K^+, –2.5; Rb^+, –3.2; Cs^+, –3.6; NH_4^+, –2.9; Ca^{2+}, –4.2; Mg^{2+}, –4.1; Sr^{2+}, –4.0; Ba^{2+}, –4.3	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
	Na^+-100 (w = 3.0 %), KTpClPB (x_i = 10 %),	Li^+, –2.9; K^+, –2.7; Rb^+, –3.5; Cs^+, –4.1;	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	BBPA (w = 66.5 %), TEHP (w = 1.4 %), PVC (w = 29.1 %)	NH_4^+, –3.3; Ca^{2+}, –4.1; Mg^{2+}, –5.0; Sr^{2+}, –4.3; Ba^{2+}, –4.4							
Na^+-101	**Na^+-101** (w = 3.0 %), KTpClPB (x_i = 10 %), BBPA (w = 67.9 %), PVC (w = 29.1 %)	Li^+, –2.5; K^+, –2.3; Rb^+, –3.1; Cs^+, –3.6; NH_4^+, –2.8; Ca^{2+}, –3.5; Mg^{2+}, –4.0; Sr^{2+}, –3.9; Ba^{2+}, –3.7	FIM	–	0.1	–	–	25 ± 0.5 °C; r.o.o.g.	[34]
Na^+-102	**Na^+-102** (w = 3.2 %), KTpClPB (x_i = 15 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.31 ± 0.05; K^+, +0.68 ± 0.02	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-103	**Na^+-103** (w = 3.2 %), KTpClPB (x_i = 16 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.46 ± 0.01; K^+, –0.65 ± 0.03	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-104	**Na^+-104** (w = 3.2 %), KTpClPB (x_i = 17 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.52 ± 0.05; K^+, –1.74 ± 0.03	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-105	**Na^+-105** (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.73 ± 0.03; K^+, –1.49 ± 0.02	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-106	**Na^+-106** (w = 3.2 %), KTpClPB (x_i = 17 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –2.84 ± 0.01; K^+, –1.98 ± 0.02	FIM	– –	0.1 or 0.5 0.05 or 0.01	59	–	24–25 °C	[17]
Na^+-107	**Na^+-107** (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.73; K^+, –1.49	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-108	**Na^+-108** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.78; K^+, –1.54	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-109	**Na^+-109** (w = 3.2 %), KTpClPB (x_i = 22 %),	Li^+, –3.75; K^+, –1.55	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oNPOE (w = 64.1 %), PVC (w = 32.0 %)								
Na^+-110	**Na^+-110** (w = 3.2 %), KTpClPB (x_i = 23 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.75;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –1.59;		–	0.05				
		Rb^+, –2.18; Cs^+, –2.65;		–	0.1				
		NH_4^+, –3.27; Ca^{2+}, –3.75; Sr^{2+}, –2.65; Ba^{2+}, –3.18;		–	0.5				
		Mg^{2+}, –3.83		–	1.0				
Na^+-111	**Na^+-111** (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.67;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –1.73;		–	0.05				
		Rb^+, –2.35; Cs^+, –2.75;		–	0.1				
		NH_4^+, –3.30; Ca^{2+}, –3.69; Sr^{2+}, –2.72; Ba^{2+}, –3.12;		–	0.5				
		Mg^{2+}, –3.81		–	1.0				
Na^+-112	**Na^+-112** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.68;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –1.70;		–	0.05				
		Rb^+, –2.35; Cs^+, –2.69;		–	0.1				
		NH_4^+, –3.32; Ca^{2+}, –3.80; Sr^{2+}, –2.66; Ba^{2+}, –3.12;		–	0.5				
		Mg^{2+}, –3.86		–	1.0				
Na^+-113	**Na^+-113** (w = 3.2 %), KTpClPB (x_i = 30 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	K^+, –1.26	FIM	–	0.05	59	–	24–25 °C	[19]
Na^+-114	**Na^+-114** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.83;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –1.39;		–	0.05				
		Rb^+, –1.98; Cs^+, –2.35;		–	0.1				
		NH_4^+, –2.57; Ca^{2+}, –3.78; Sr^{2+}, –2.65; Ba^{2+}, –3.12;		–	0.5				
		Mg^{2+}, –3.79		–	1.0				
Na^+-115	**Na^+-115** (w = 3.2 %), KTpClPB (x_i = 21 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.85;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –1.25;		–	0.05				
		Rb^+, –1.79; Cs^+, –2.37;		–	0.1				
		NH_4^+, –2.99; Ca^{2+}, –3.79; Sr^{2+}, –2.72; Ba^{2+}, –3.11;		–	0.5				
		Mg^{2+}, –3.74		–	1.0				
Na^+-116	**Na^+-116** (w = 3.2 %), KTpClPB (x_i = 22 %),	Li^+, –3.90;	FIM	–	0.5	59	–	24–25 °C	[19]
		K^+, –0.94;		–	0.05				

Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
	oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Rb^+, –1.53; Cs^+, –1.92; NH_4^+, –2.61; Ca^{2+}, –3.80; Sr^{2+}, –2.71; Ba^{2+}, –2.84; Mg^{2+}, –3.75		– – –	0.1 0.5 1.0				
Na^+-117	**Na^+-117** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.83; K^+, –0.48	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-118	**Na^+-118** (w = 3.2 %), KTpClPB (x_i = 22 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.84; K^+, –0.46	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-119	**Na^+-119** (w = 3.2 %), KTpClPB (x_i = 18 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.78; K^+, –0.42	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-120	**Na^+-120** (w = 3.2 %), KTpClPB (x_i = 19 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.80; K^+, –0.51	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-121	**Na^+-121** (w = 3.2 %), KTpClPB (x_i = 21 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.73; K^+, –1.54	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-122	**Na^+-122** (w = 3.2 %), KTpClPB (x_i = 24 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.73; K^+, –1.48	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-123	**Na^+-123** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.76; K^+, –1.51	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-124	**Na^+-124** (w = 3.2 %), KTpClPB (x_i = 20 %), oNPOE (w = 64.1 %), PVC (w = 32.0 %)	Li^+, –3.63; K^+, –1.53	FIM	– –	0.5 0.05	59	–	24–25 °C	[19]
Na^+-125	**Na^+-125** (w = 2.8 %), oNPOE (w = 64.4 %), PVC (w = 27.8 %)	Li^+, –2.89; K^+, –1.72; Rb^+, –1.92; Cs^+, –2.11	FIM	–	0.05	–	–	25 °C; pH = 11	[35]

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Table 3: Na^+–Selective Electrodes (*Continued*)

ionophore	membrane composition	$\lg K_{Na^+,B^{n+}}$	method	primary ion conc. (M)	interfering ion conc. (M)	slope (mV/ decade)	linear range (M)	remarks	ref.
		Li^+, –2.59; K^+, –2.89; Rb^+, –2.45; Cs^+, –2.82	FIM	–	0.05	–	–	25 °C; pH = 12	
		Li^+, –2.85; K^+, –2.05; Rb^+, –2.82; Cs^+, –3.09	FIM	–	0.05	–	–	25 °C; pH = 13	
	Na^+-125 (*w* = 2.8 %), oNPPE (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –2.7; K^+, –1.8; Rb^+, –2.6; Cs^+, –2.5	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]
	Na^+-125 (*w* = 2.8 %), FNDPE (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –2.7; K^+, –1.9; Rb^+, –2.3; Cs^+, –3.0	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]
	Na^+-125 (*w* = 2.8 %), DPP (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –2.8; K^+, –1.9; Rb^+, –2.5; Cs^+, –2.2	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]
	Na^+-125 (*w* = 2.8 %), DOS (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –2.8; K^+, –1.7; Rb^+, –2.5; Cs^+, –3.1	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]
	Na^+-125 (*w* = 2.8 %), TEHP (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –1.9; K^+, –1.7; Rb^+, –2.4; Cs^+, –2.5	FIM	–	0.05	–	–	25 °C; pH = 13	[35]
Na^+-126	**Na^+-126** (*w* = 2.8 %), oNPOE (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –1.9; K^+, –1.1; Rb^+, –1.3; Cs^+, –1.3	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]
Na^+-127	**Na^+-127** (*w* = 2.8 %), oNPOE (*w* = 64.4 %), PVC (*w* = 27.8 %)	Li^+, –1.0; K^+, –0.1; Rb^+, –0.5; Cs^+, –0.9	FIM	–	0.05	–	–	25 °C; pH = 13; r.o.o.g.	[35]

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Table 3: Na^+–Selective Electrodes (*Continued*)

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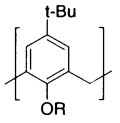
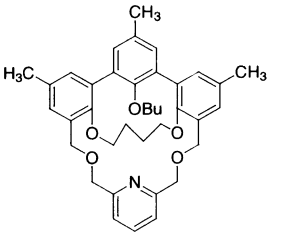
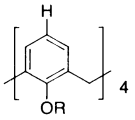


Na^+-1 (M_r = 1442.17): R=$CH_2CO_2C_{10}H_{21}$
Na^+-2 (M_r = 1326.01): R=$CH_2CON(C_4H_9)_2$
Na^+-3 (M_r = 993.30): R=CH_2CO_2Et
Na^+-4 (M_r = 873.19): R=CH_2COCH_3
Na^+-5 (M_r = 1041.52): R=$CH_2COC(CH_3)_3$
Na^+-6 (M_r = 1353.98):
R=CH_2CO(adamantyl)
Na^+-7 (M_r = 937.19): R=$CH_2CO_2CH_3$
Na^+-16 (M_r = 1091.41)
R=(3×)-CH_2CO_2Et
(1×)-$CH_2CO_2CH_2CH_2CH_2OCOC(CH_3)=CH_2$
Na^+-18 (M_r = 1385.71):
R=-$CH_2CO_2CH_2CH_2CH_2OCOC(CH_3)=CH_2$

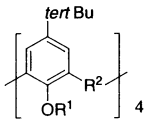
Na^+-9 (M_r = 1113.41):
R=$CH_2CO_2CH_2CH_2OCH_3$
Na^+-11 (M_r = 1185.48): R=$CH_2CO_2C_6H_5$
Na^+-12 (M_r = 1121.48): R=$CH_2COC_6H_5$
Na^+-13 (M_r = 1101.58): R=CH_2CONEt_2
Na^+-14 (M_r = 1165.82): R=CH_2CSNEt_2
Na^+-15 (M_r = 1105.52): R=$CH_2CO_2C(CH_3)_3$
Na^+-17 : A polymer of (Na^+-16)
Na^+-20 (M_r = 979.27):
R=(3×)-CH_2CO_2Et
(1×)-$CH_2CO_2CH_3$



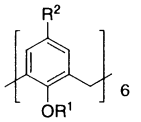
Na^+-8 (M_r = 593.77)



Na^+-10 (M_r = 985.58): R=n-$C_{10}H_{21}$



Na^+-19 (M_r = 1025.30):
R^1=-CH_2CO_2Et
R^2=(2×)-CH_2-
(2×)-CH_2O-



Na^+-21 (M_r = 1309.53):
R^1=-CH_2CO_2Et
R^2=-CH=CH_2

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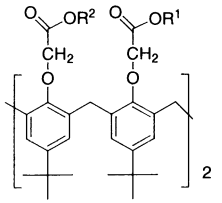
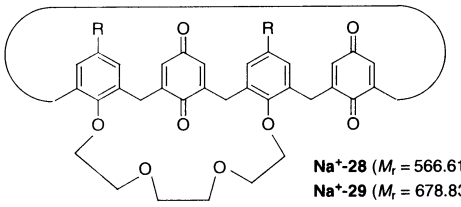
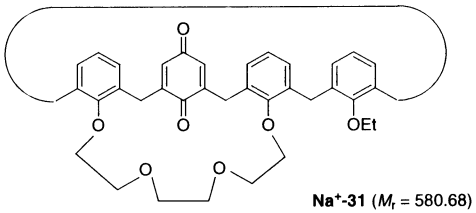
Table 3: Na^+–Selective Electrodes (*Continued*)



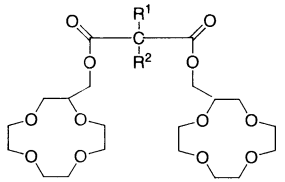
Na^+-22 (M_r = 1049.41): R^1=R^2= C_3H_7
Na^+-23 (M_r = 1105.52): R^1=R^2= n-C_4H_9
Na^+-24 (M_r = 1217.73): R^1= C_2H_5 , R^2= $C_{10}H_{21}$
Na^+-25 (M_r = 1075.45): R^1= C_2H_5; bridged type: [R^2-R^2] = -$(CH_2)_{10}$-
Na^+-26 (M_r = 1103.50): R^1= C_2H_5 ; bridged type: [R^2-R^2] = -$(CH_2)_{12}$-
Na^+-27 (M_r = 1095.39): R_1= C_2H_5; bridged type: [R^2-R^2] = -$(CH_2)_2$-$(OCH_2CH_2)_3$-



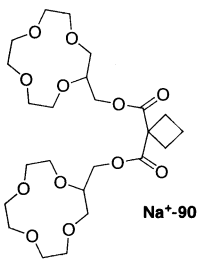
Na^+-28 (M_r = 566.61): R=H
Na^+-29 (M_r = 678.83): R=*tert* Butyl
Na^+-30 (M_r = 791.05): R=*tert* Octyl



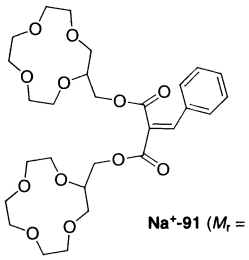
Na^+-31 (M_r = 580.68)



Na^+-43 (M_r = 534.87): R^1=CH_3 , R^2=$C_{12}H_{25}$
Na^+-80 (M_r = 647.09): R^1=$C_{18}H_{37}$, R^2=C_3H_7
Na^+-81 (M_r = 689.17): R^1= R^2=$C_{12}H_{25}$
Na^+-82 (M_r = 610.97): R^1=$C_{12}H_{25}$, R^2=$CH_2C_6H_5$
Na^+-83 (M_r = 532.77): R^1=R^2=$CH_2C_6H_5$



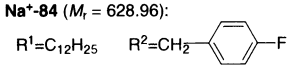
Na^+-90 (M_r = 520.57)



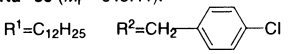
Na^+-91 (M_r = 568.62)

Table 3: Na^+–Selective Electrodes (*Continued*)

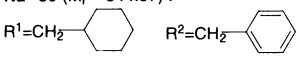
Na⁺-84 (M_r = 628.96):



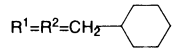
Na⁺-85 (M_r = 645.41):



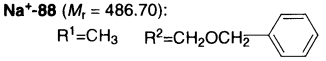
Na⁺-86 (M_r = 544.87) :



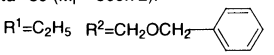
Na⁺-87 (M_r = 542.85) :

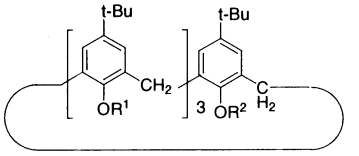


Na⁺-88 (M_r = 486.70):

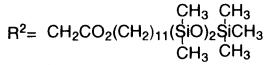


Na⁺-89 (M_r = 500.72):

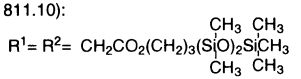




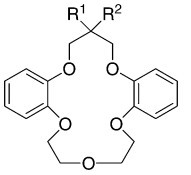
Na⁺-44 (M_r = 1309.96): $R^1=CH_2CO_2C_2H_5$

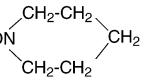
$R^2=$ 

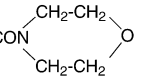
Na⁺-45 (M_r = 1811.10):

$R^1= R^2=$ 

Na⁺-32 (M_r = 330.38): R^1=H, R^2=H
Na⁺-33 (M_r = 360.41): R^1=H, $R^2=OCH_3$
Na⁺-34 (M_r = 404.46): R^1=H, $R^2=OC_2H_4OCH_3$
Na⁺-35 (M_r = 432.47): R^1=H, $R^2=OCH_2CO_2C_2H_5$
Na⁺-36 (M_r = 459.54): R^1=H, $R^2=OCH_2CON(C_2H_5)_2$
Na⁺-37 (M_r = 543.70): R^1=H, $R^2=OCH_2CON(C_5H_{11})_2$
Na⁺-38 (M_r = 374.44): $R^1=CH_3$, $R^2=OCH_3$
Na⁺-39 (M_r = 418.49): $R^1= CH_3$, $R^2=OC_2H_4OCH_3$
Na⁺-40 (M_r = 446.50): $R^1=CH_3$ $R^2=OCH_2CO_2C_2H_5$
Na⁺-41 (M_r = 473.57): $R^1=CH_3$, $R^2=OCH_2CON(C_2H_5)_2$
Na⁺-42 (M_r = 557.73): $R^1=CH_3$ $R^2=OCH_2CON(C_5H_{11})_2$
Na⁺-74 (M_r = 473.57): R^1=H, $R^2=OCH_2CONH(C_5H_{11})$
Na⁺-75 (M_r = 515.65): $R^1=C_3H_7$, $R^2=OCH_2CONH(C_5H_{11})$
Na⁺-76 (M_r = 561.67): $R^1=C_3H_7$, $R^2=OCH_2CON(CH_2CH_2OCH_3)_2$
Na⁺-77 (M_r = 613.75): $R^1=C_3H_7$, $R^2=OCH_2CON(CH_2CH_2OCH_2CH_2CH_3)_2$



Na⁺-78 (M_r = 513.63): $R^1=C_3H_7$, $R^2=OCH_2CON$ 

Na⁺-79 (M_r = 515.61): $R^1=C_3H_7$, $R^2=OCH_2CON$ 

Na⁺-102 (M_r = 372.46): R^1= H , $R^2=C_3H_7$
Na⁺-103 (M_r = 404.42): R^1= H , $R^2=OCH_2CO_2H$
Na⁺-104 (M_r = 446.50): $R^1= C_3H_7$, $R^2=OCH_2CO_2H$
Na⁺-105 (M_r = 474.56): $R^1=C_3H_7$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-106 (M_r = 501.63): $R^1= C_3H_7$, $R^2=OCH_2CON(C_2H_5)_2$
Na⁺-107 (M_r = 460.52): $R^1= C_2H_5$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-108 (M_r = 488.58): $R^1= C_4H_9$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-109 (M_r = 544.69): $R^1= C_8H_{17}$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-110 (M_r = 572.74): $R^1= C_{10}H_{21}$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-111 (M_r = 474.56): $R^1= (CH_3)_2CH$-,$R^2=OCH_2CO_2C_2H_5$
Na⁺-112 (M_r = 502.61) : $R^1= (CH_3)_3CCH_2$, $R^2= OCH_2CO_2C_2H_5$
Na⁺-113 (M_r = 750.51): $R^1= C_6F_{13}$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-114 (M_r = 508.57): $R^1= C_6H_5$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-115 (M_r = 486.57): $R^1= (CH_3)_2C=CH$-, $R^2=OCH_2CO_2C_2H_5$
Na⁺-116 (M_r = 526.65): $R^1= C_6H_{13}CC$, $R^2=OCH_2CO_2C_2H_5$
Na⁺-117 (M_r = 488.58): R^1= H, $R^2=OCH_2CO_2C_6H_{13}$
Na⁺-118 (M_r = 544.69): R^1= H, $R^2=OCH_2CO_2C_{10}H_{21}$
Na⁺-119 (M_r = 446.50): R^1= H, $R^2=OCH_2CO_2CH(CH_3)_2$
Na⁺-120 (M_r = 460.52): R^1= H, $R^2=OCH_2CO_2C(CH_3)_3$
Na⁺-121 (M_r = 488.58): $R^1= C_3H_7$, $R^2=OCH_2CO_2C_6H_{13}$
Na⁺-122 (M_r = 586.77): $R^1= C_3H_7$, $R^2=OCH_2CO_2C_{10}H_{21}$
Na⁺-123 (M_r = 488.58): $R^1= C_3H_7$, $R^2=OCH_2CO_2CH(CH_3)_2$
Na⁺-124 (M_r =$_r$ 502.61): $R^1= C_3H_7$ $R^2=OCH_2CO_2C(CH_3)_3$

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Table 3: Na^+–Selective Electrodes (*Continued*)

Na^+-46 (M_r = 670.88): R=H
Na^+-59 (M_r = 684.91): R=CH_3
Na^+-60 (M_r = 698.94) : R=C_2H_5
Na^+-61 (M_r = 726.99): R=C_4H_9
Na^+-62 (M_r = 761.01): R=$CH_2C_6H_5$
Na^+-63 (M_r = 839.21) : R=$C_{12}H_{25}$

Na^+-49 (M_r = 430.63)

Na^+-50 (M_r = 462.62)

Na^+-47 (M_r = 460.07)

Na^+-48 (ETH 157, M_r = 556.67)

Na^+-51 (M_r = 550.73)

Na^+-52 (M_r = 224.25): R=H
Na^+-53 (M_r = 280.36): R=$C(CH_3)_3$
Na^+-54 (M_r = 336.47): R=$C(CH_3)_2C_5H_{11}$
Na^+-55 (M_r = 434.66) : R=$C(CH_3)_2C_{12}H_{25}$

Na^+-56 (M_r = 274.31): R=H
Na^+-57 (M_r = 330.42) : R=$C(CH_3)_3$
Na^+-58 (M_r = 386.53): R=$C(CH_3)_2C_5H_{11}$

Na^+-92 (ETH 2120, M_r = 552.80)

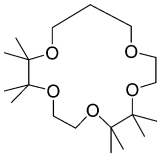
Na^+-93 (ETH 227, M_r = 641.97)

Na^+-94 (M_r = 486.78)

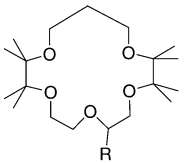
Na^+-95 (M_r = 312.41)

Na^+-96 (M_r = 342.47)

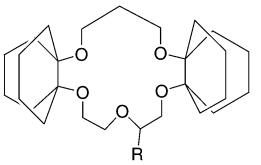
Table 3: Na^+–Selective Electrodes (*Continued*)



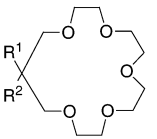
Na^+-97 (M_r = 346.51)



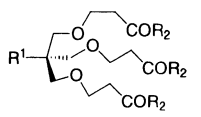
Na^+-98 (M_r = 346.51): R = H
Na^+-99 (M_r = 542.89): R = $C_{14}H_{29}$



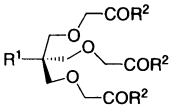
Na^+-100 (M_r = 450.66): R = H
Na^+-101 (M_r = 634.02): R = $C_{14}H_{29}$



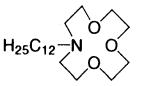
Na^+-64 (M_r = 262.34): R^1=R^2=CH_3
Na^+-65 (M_r = 452.72): R^1=CH_3, R^2=$CH_2O(CH_2)_{11}CH_3$
Na^+-66 (M_r = 368.47): R^1=CH_3, R^2=$CH_2OCH_2C_6H_5$
Na^+-67 (M_r = 382.50): R^1=C_2H_5, R^2=$CH_2OCH_2C_6H_5$
Na^+-68 (M_r = 410.55): R^1=$(CH_2)_2CH_3$, R^2=$CH_2OCH_2C_6H_5$
Na^+-69 (M_r = 466.66): R^1=$(CH_2)_7CH_3$, R^2=$CH_2OCH_2C_6H_5$



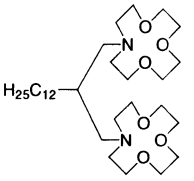
Na^+-72 (M_r = 672.05): R^1=C_2H_5, R^2=NBu_2
Na^+-73 (M_r = 506.68): R^1=C_2H_5, R^2=OBu



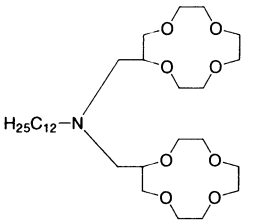
Na^+-70 (M_r = 641.98): R^1=C_2H_5, R^2=NBu_2
Na^+-71 (M_r = 476.61): R^1=C_2H_5, R^2=OBu



Na^+-127 (M_r = 343.55)



Na^+-125 (M_r = 558.84)



Na^+-126 (M_r = 561.80)