

Table 4S. Continued

41	1-Propylpyridinium tetrafluoroborate	C ₈ H ₁₂ BF ₄ N	25	3.81	11.05	7.51	1.18
42	1-Ethyl-2-methylpyridinium bis((trifluoromethyl)sulfonyl)amide	C ₁₀ H ₁₂ F ₆ N ₂ O ₄ S ₂	25	3.15	13.96	9.36	4.71
43	2-Methyl-1-propylpyridinium bis((trifluoromethyl)sulfonyl)imide	C ₁₁ H ₁₄ F ₆ N ₂ O ₄ S ₂	25	4.49	10.76	11.45	6.05
44	1-n-butyl-3-methylimidazolium bromide	C ₈ H ₁₅ BrN ₂	25	16.05	24.22	55.04	7.10
45	1-Methyl-1-propylpiperidinium bis(trifluoromethylsulfonyl)imide	C ₁₁ H ₂₀ F ₆ N ₂ O ₄ S ₂	24	5.58	7.90	10.24	4.51
46	1-Ethylpyridinium bis((trifluoromethyl)sulfonyl)imide	C ₉ H ₁₀ F ₆ N ₂ O ₄ S ₂	21	0.58	8.43	2.01	0.99
47	1-Butyl-3-methylimidazolium acetate	C ₁₀ H ₁₈ N ₂ O ₂	21	3.39	16.62	21.23	5.47
48	1-Ethyl-3-methylimidazolium dicyanamide	C ₈ H ₁₁ N ₅	21	4.49	25.61	22.76	6.36
49	1-Butyl-3-methylimidazolium methylsulfate	C ₉ H ₁₈ N ₂ O ₄ S	21	11.89	17.77	31.52	11.75
50	1-Butyl-4-methylpyridinium bis((trifluoromethyl)sulfonyl)amide	C ₁₂ H ₁₆ F ₆ N ₂ O ₄ S ₂	20	5.64	17.47	2.66	4.13
51	1-Ethyl-3-methyl-1H-imidazolium 1,1,2,2- tetrafluoroethane-1-sulfonate	C ₈ H ₁₂ F ₄ N ₂ O ₃ S	20	16.33	30.02	6.39	12.23
52	1-Ethyl-4-methylpyridinium bis((trifluoromethyl)sulfonyl)amide	C ₁₀ H ₁₂ F ₆ N ₂ O ₄ S ₂	20	14.79	28.59	9.27	13.37
53	N-(2-hydroxyethyl)-N,N- dimethylbutanaminium bromide	C ₈ H ₂₀ BrNO	19	9.32	22.38	11.45	6.54
54	1-Ethyl-3-methylimidazolium bromide	C ₆ H ₁₁ BrN ₂	17	22.16	29.07	32.70	12.24
55	1-Ethyl-3-methylimidazolium diethylphosphate	C ₁₀ H ₂₁ N ₂ O ₄ P	17	9.45	18.86	6.60	6.82
56	N-ethyl-N-(2-hydroxyethyl)-N,N- dimethylammonium ethyl sulfate	C ₈ H ₂₁ NO ₅ S	16	17.63	28.47	3.51	10.37
57	1-Butyl-3-methylimidazolium chloride	C ₈ H ₁₅ ClN ₂	16	1.97	23.26	24.80	1.24
58	Trihexyltetradecylphosphonium bis(2,4,4- trimethylpentyl)phosphinate	C ₄₈ H ₁₀₂ O ₂ P ₂	15	2.09	2.39	4.59	1.83
59	1-Butyl-1-methylpyrrolidinium tris(pentafluoroethyl)trifluorophosphate	C ₁₅ H ₂₀ F ₁₈ NP	14	6.26	1.23	7.95	9.22
60	N-(2-hydroxyethyl)-N,N-dimethylhexan-1- aminium bromide	C ₁₀ H ₂₄ BrNO	13	2.08	21.37	16.13	0.13
61	1-Propylpyridinium hexafluorophosphate	C ₈ H ₁₂ F ₆ NP	13	6.39	2.98	12.32	9.62
62	1-Butyl-3-methylimidazolium thiocyanate	C ₉ H ₁₅ N ₃ S	12	11.88	28.35	14.29	11.17

Table 4S. Continued

63	1-Ethyl-3-methylimidazolium 2-(2-methoxyethoxy) ethylsulfate	C ₁₁ H ₂₂ N ₂ O ₆ S	12	4.39	10.76	5.05	1.38
64	4,6-Dimethyl-N-phenylpyrimidin-2-amine dodecanoate	C ₂₄ H ₃₇ N ₃ O ₂	10	2.06	13.90	2.88	2.80
65	1-Butyl-3-methyl-1H-imidazolium tetrachloroferrate(III)	C ₈ H ₁₅ Cl ₄ FeN ₂	9	13.10	21.86	10.55	9.66
66	1-Ethyl-3-methylimidazolium thiocyanate	C ₇ H ₁₁ N ₃ S	9	2.90	29.59	34.93	3.10
67	N,N-dibutyl-N-methylbutanaminium L-serinate	C ₁₆ H ₃₆ N ₂ O ₃	9	8.23	16.33	5.87	2.13
68	N,N-dibutyl-N-methyl-1-butanaminium L-lysinate	C ₁₉ H ₄₃ N ₃ O ₂	9	19.93	23.69	19.01	16.81
69	N,N-dibutyl-N-methyl-1-butanaminium L-threoninate	C ₁₇ H ₃₈ N ₂ O ₃	9	19.14	26.95	17.11	13.92
70	Tetrabutylphosphonium L-serinate	C ₁₉ H ₄₂ NO ₃ P	9	7.69	14.80	6.24	4.13
71	Tetrabutylphosphonium L-lysinate	C ₂₂ H ₄₉ N ₂ O ₂ P	9	22.32	25.73	20.83	20.97
72	Tetrabutylphosphonium L-threoninate	C ₂₀ H ₄₄ NO ₃ P	9	26.23	31.37	20.76	23.45
73	Tetrabutylphosphonium L-prolinate	C ₂₁ H ₄₄ NO ₂ P	9	13.63	20.99	8.86	10.42
74	N,N-dibutyl-N-methyl-1-butanaminium 2-aminoethanesulfonate	C ₁₅ H ₃₆ N ₂ O ₃ S	9	19.15	36.02	22.89	9.62
75	Tetrabutylphosphonium L-cysteinate	C ₁₉ H ₄₂ NO ₂ PS	9	24.59	31.16	16.81	23.55
76	N-ethyl-2-hydroxy-N,N-dimethylethanaminium methanesulfonate	C ₇ H ₁₉ NO ₄ S	9	13.17	35.17	32.15	5.49
77	2-Hydroxy-N,N,N-trimethyl-ethanaminium 1-butanesulfonate	C ₉ H ₂₃ NO ₄ S	9	17.70	28.13	17.55	11.01
78	N,N,N-trimethyl-1-butanaminium 1-butanesulfonate	C ₁₁ H ₂₇ NO ₃ S	9	33.82	46.87	69.83	29.04
79	1-Ethyl-3-methylimidazolium tetracyanoborate	C ₁₀ H ₁₁ BN ₆	9	0.93	20.41	12.73	8.21
80	1-Ethyl-3-methylimidazolium methanesulfonate	C ₇ H ₁₄ N ₂ O ₃ S	8	2.68	19.73	23.25	3.23
81	1H-imidazolium, 1-ethyl-3-methyl-, salt with trifluoroacetic acid (1:1)	C ₈ H ₁₁ F ₃ N ₂ O ₂	7	12.96	11.41	38.72	23.40
82	1-(2-Hydroxyethyl)-3-methyl-1H-imidazolium 2,2,2-trifluoroacetate	C ₈ H ₁₁ F ₃ N ₂ O ₃	7	1.32	5.43	10.69	10.98
83	1-Ethyl-3-methylimidazolium hydrogen sulfate	C ₆ H ₁₂ N ₂ O ₄ S	7	3.31	15.82	37.04	9.90
84	tributylethylphosphonium diethylphosphate	C ₁₈ H ₄₂ O ₄ P ₂	7	2.13	10.65	6.27	2.07

Table 4S. Continued

85	1-Methyl-3-octylimidazolium L-asparaginate	C ₁₆ H ₃₀ N ₄ O ₃	7	9.74	9.93	5.36	6.96
86	1-Methyl-3-octylimidazolium L-alaninate	C ₁₅ H ₂₉ N ₃ O ₂	7	10.42	11.57	8.18	5.97
87	1-Methyl-3-octyl-1H-imidazol-3-ium L-prolinate	C ₁₇ H ₃₁ N ₃ O ₂	7	4.45	2.62	19.82	9.59
88	N-ethyl-N,N-dimethyl-N-butylammonium ethyl sulfate	C ₁₀ H ₂₅ NO ₄ S	7	4.41	23.28	37.96	3.15
89	1-Ethyl-3-methylimidazolium tosylate	C ₁₃ H ₁₈ N ₂ O ₃ S	6	4.71	17.72	5.83	7.21
90	1,3-Dimethylimidazolium methylsulfate	C ₆ H ₁₂ N ₂ O ₄ S	6	9.77	26.61	9.66	3.88
91	Tetrapropylammonium bromide	C ₁₂ H ₂₈ BrN	6	36.47	5.59	38.76	32.87
92	Pyrrolidinium nitrate	C ₄ H ₁₀ N ₂ O ₃	5	6.55	26.56	15.01	4.98
93	1-Ethylpyridinium hexafluorophosphate	C ₇ H ₁₀ F ₆ NP	5	6.07	5.12	10.42	9.88
94	1-Butyl-3-methylimidazolium tosylate	C ₁₅ H ₂₂ N ₂ O ₃ S	5	6.72	6.95	9.25	12.77
95	1-Ethyl-3-methylimidazolium methylsulfate	C ₇ H ₁₄ N ₂ O ₄ S	4	1.03	15.82	24.77	6.17
96	1,2-Dimethyl-3-propylimidazolium bis[(trifluoromethyl)sulfonyl]imide	C ₁₀ H ₁₅ F ₆ N ₃ O ₄ S ₂	3	15.05	8.51	23.10	7.05
97	3-Cyano-1-octylpyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	C ₁₆ H ₂₁ F ₆ N ₃ O ₄ S ₂	3	6.48	1.85	11.59	6.43
98	1-Hexyl-4-cyanopyridinium bis(trifluoromethylsulfonyl)imide	C ₁₄ H ₁₇ F ₆ N ₃ O ₄ S ₂	3	9.26	2.17	11.93	9.16
99	1-Butyl-3-cyanopyridinium bis(trifluoromethylsulfonyl)imide	C ₁₂ H ₁₃ F ₆ N ₃ O ₄ S ₂	3	7.02	2.71	6.93	6.84
100	3-Cyano-1-hexylpyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	C ₁₄ H ₁₇ F ₆ N ₃ O ₄ S ₂	3	4.91	1.90	7.47	4.81
101	1-Methylpyridinium methylsulfate	C ₇ H ₁₁ NO ₄ S	3	8.56	2.66	17.72	20.15
102	1,2-Diethylpyridinium ethylsulfate	C ₁₁ H ₁₉ NO ₄ S	3	9.35	6.61	24.56	18.80
103	1-Butyl-1-methylpyrrolidinium trifluoromethanesulfonate	C ₁₀ H ₂₀ F ₃ NO ₃ S	3	4.94	1.53	32.77	12.24
104	3-Hexyl-1-methyl-1H-imidazolium bromide	C ₁₀ H ₁₉ BrN ₂	3	20.17	10.27	37.38	13.52
105	3-(Ethoxycarbonyl)-1-ethylpyridinium ethylsulfate	C ₁₂ H ₁₉ NO ₆ S	2	0.97	18.06	6.54	7.85
106	1-Ethyl-3-methylpyridinium ethylsulfate	C ₁₀ H ₁₇ NO ₄ S	2	2.75	11.44	20.91	9.97
107	17-Hydroxy-N-(17-hydroxy-3,6,9,12,15-pentaoxaheptadec-1-yl)-N-methyl-N-tetradecyl-3,6,9,12,15-pentaoxaheptadecan-1-aminium methyl sulfate	C ₄₀ H ₈₅ NO ₁₆ S	2	48.99	62.79	51.92	53.58

Table 4S. Continued

108	Tetrabutylammonium docusate	$C_{36}H_{73}NO_7S$	2	2.50	3.33	48.94	1.80
109	1-Methyl-3-(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-1H-imidazolium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	$C_{12}H_{12}F_{15}N_3O_4S_2$	2	7.28	8.48	0.42	5.04
110	1-Hexyl-2,3-dimethylimidazolium bis[(trifluoromethyl)sulfonyl]imide	$C_{13}H_{21}F_6N_3O_4S_2$	2	3.60	17.34	9.61	4.38
111	1-Butyl-3-methylimidazolium 2-(2-methoxyethoxy)ethyl sulfate	$C_{13}H_{26}N_2O_6S$	2	12.53	15.79	3.89	7.68
112	1-Octyl-3-methylpyridinium bis(trifluoromethylsulfonyl)imide	$C_{16}H_{24}F_6N_2O_4S_2$	2	10.27	2.21	21.38	11.73
113	1-Hexyl-3-methyl-4-(dimethylamino)pyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	$C_{16}H_{25}F_6N_3O_4S_2$	2	2.85	18.31	5.56	2.35
114	1-Hexyl-4-(4-methyl-1-piperidinyl)pyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	$C_{19}H_{29}F_6N_3O_4S_2$	2	34.70	27.02	47.83	34.35
115	1-Butyl-3-methylpyridinium tetrafluoroborate	$C_{10}H_{16}BF_4N$	2	1.36	15.43	23.10	6.38
116	1-Butyl-nicotinic acid butyl ester bis[(trifluoromethyl)sulfonyl]imide	$C_{16}H_{22}F_6N_2O_6S_2$	2	9.21	2.93	15.28	11.21
117	1-Hexylpyridinium bis(trifluoromethylsulfonyl)imide	$C_{13}H_{18}F_6N_2O_4S_2$	2	5.10	2.46	11.50	6.62
118	1-Hexyl-3-methylpyridinium bromide	$C_{12}H_{20}BrN$	2	40.09	0.50	46.46	34.76
119	1-Hexyl-3-methylpyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	$C_{14}H_{20}F_6N_2O_4S_2$	2	8.21	2.37	17.81	9.74
120	1-Hexyl-3,5-dimethylpyridinium bis(trifluoromethylsulfonyl)imide	$C_{15}H_{22}F_6N_2O_4S_2$	2	11.92	6.44	23.07	13.45
121	3,5-Diethyl-1-hexyl-2-propylpyridinium 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	$C_{20}H_{32}F_6N_2O_4S_2$	2	12.60	5.88	18.59	13.90
122	1-Butyl-2,3-dimethylimidazolium tetrafluoroborate	$C_9H_{17}BF_4N_2$	2	7.77	17.11	32.10	9.63
123	1-Ethyl-2,3-dimethylimidazolium bis[(trifluoromethyl)sulfonyl]imide	$C_9H_{13}F_6N_3O_4S_2$	2	9.67	14.61	19.76	8.40

Table 4S. Continued

124	1-Butyl-2,3-dimethylimidazolium hexafluorophosphate	C ₉ H ₁₇ F ₆ N ₂ P	2	2.48	22.09	23.71	2.38
125	1-Butyl-3-methylpyridinium tetracyanoborate	C ₁₄ H ₁₆ BN ₅	2	1.88	16.27	9.71	1.62
126	1-Butyl-1-methylpyrrolidinium tetracyanoborate	C ₁₃ H ₂₀ BN ₅	2	8.34	13.71	10.51	12.28
127	1-Butyl-3-methylpyridinium tricyanomethanide	C ₁₄ H ₁₆ N ₄	2	2.95	18.10	12.65	6.40
128	1-Methyl-3-octylimidazolium bromide	C ₁₂ H ₂₃ BrN ₂	1	11.47	10.25	25.32	6.37
129	N-butyl-3-methylpyridinium dicyanamide	C ₁₂ H ₁₆ N ₄	1	15.15	6.63	37.75	18.12
130	3-(2-Hydroxyethyl)-1-methyl-1H-imidazol-3-ium dicyanoazanide	C ₈ H ₁₁ N ₅ O	1	42.34	33.99	64.95	40.24
131	1-Butyl-3-methylimidazolium tricyanomethane	C ₁₂ H ₁₅ N ₅	1	45.86	19.58	70.78	45.79
132	1-Ethyl-3-methylimidazolium acetate	C ₈ H ₁₄ N ₂ O ₂	1	2.91	23.79	23.34	6.88
133	1-Ethyl-3-methylimidazolium dimethylphosphate	C ₈ H ₁₇ N ₂ O ₄ P	1	7.44	20.68	10.00	4.98
134	1-Ethyl-3-methylimidazolium methyl phosphonate	C ₇ H ₁₅ N ₂ O ₃ P	1	5.93	20.04	19.49	4.17
135	1-Pentyl-3-methylimidazolium bis(trifluoromethylsulfonyl)amide	C ₁₁ H ₁₇ F ₆ N ₃ O ₄ S ₂	1	0.80	7.82	12.71	0.29
136	1-Heptyl-3-methylimidazolium bis(trifluoromethylsulfonyl)amide	C ₁₃ H ₂₁ F ₆ N ₃ O ₄ S ₂	1	0.88	5.02	13.65	0.03
137	1-Dodecyl-3-methyl-1H-imidazolium bis(trifluoromethylsulfonyl)amide	C ₁₈ H ₃₁ F ₆ N ₃ O ₄ S ₂	1	0.87	0.19	15.60	0.19
138	1-Decyl-3-methylimidazolium bis(trifluoromethylsulfonyl)amide	C ₁₆ H ₂₇ F ₆ N ₃ O ₄ S ₂	1	1.03	1.71	15.09	0.28
139	1-Hexyl-3-methylimidazolium chloride	C ₁₀ H ₁₉ ClN ₂	1	0.64	16.57	29.18	0.19
140	1-Methyl-3-octylimidazolium chloride	C ₁₂ H ₂₃ ClN ₂	1	0.81	11.26	23.91	0.41
141	1,3-Dimethylimidazolium bromide	C ₅ H ₉ BrN ₂	1	25.68	41.73	48.44	11.71