7/25/2012 11:17:32 AM

Method: AgNO3 AgNO3

Start time: 7/25/2012 11:50:54

AM

Sample data

No.	Comment / ID	Start time	Sample size	Corr. f	Density
1/6	NaCl	7/25/2012 11:50:54 AM	0.03496 g	1.0	0 g/mL
2/6	NaCl	7/25/2012 11:56:52 AM	0.03608 g	1.0	0 g/mL
3/6	NaCl	7/25/2012 12:02:38 PM	0.03813 g	1.0	0 g/mL
4/6	NaCl	7/25/2012 12:08:30 PM	0.03993 g	1.0	0 g/mL
5/6	NaCl	7/25/2012 12:14:27 PM	0.03556 g	1.0	0 g/mL
6/6	NaCl	7/25/2012 12:20:19 PM	0.03677 g	1.0	0 g/mL

Results

No.	Comment / ID	Start time S	ample size and resu	ılts	
1/6	NaCl	7/25/2012 11:50:54 AM	0.03496	g	
			R1 = 1.00521		Titer
2/6	NaCl	7/25/2012 11:56:52 AM	0.03608	g	
			R1 = 0.99966		Titer
3/6	NaCl	7/25/2012 12:02:38 PM	0.03813	g	
			R1 = 1.00211		Titer
4/6	NaCl	7/25/2012 12:08:30 PM	0.03993	g	
			R1 = 1.00142		Titer
5/6	NaCl	7/25/2012 12:14:27 PM	0.03556	g	
			R1 = 1.00251		Titer
6/6	NaCl	7/25/2012 12:20:19 PM	0.03677	g	
			R1 = 1.00460		Titer
-/-			R2 = 1.00258		Mean Titer
Titer					
-	Titer	1.00258			

Series comment

Statistics

Rx	Name	n	Mean value	Unit	S	srel [%]	
R1	Titer	6	1.00258		0.00205	0.205	
R2	Mean Titer	1	1.00258		NaN	NaN	

Raw data

Sample

No. 1/6 Standard NaCl Type of standard solid

Comment

Titration stand Rondolino TTL 1 Weight m = 0.03496 g Correction factor f = 1.0

Method:

Serial No. B201599511

AgNO3

Start time: 7/25/2012 11:50:54

AM

AgNO3

Purity p = 100.00 %T = 25.0 oCTemperature

Sample start 7/25/2012 11:50:54 AM Sample end 7/25/2012 11:56:51 AM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -78.5 mVNo. of EQPs and cand. nEQ = 1

Consumption EQP1 VEQ1 = 5.951190 mL

> Q1 = 0.572838 mmolEEQ1 = 79.4 mVEHNV1 = -63.4 mV

7/25/2012 11:17:32 AM

Excess VEX = 0.183310 mLQEX = 0.017645 mmolVEND = 6.1345 mLEnd

QEND = 0.590482 mmol

Termination at **EQPs** Time t = 2:19 min

Calculation

Result R1 = 1.00521 -- Titer Formula R1=m/(VEQ*c*C)Constant M/(10*p*z)

C = 0.05844

Molar mass M[NaCl] = 58.44 g/mol

Equivalent number z[NaCl] = 1Duration tUSE = 03:37 min

Measured values **EQP** titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

DM141-SC Sensor Sample 1/6

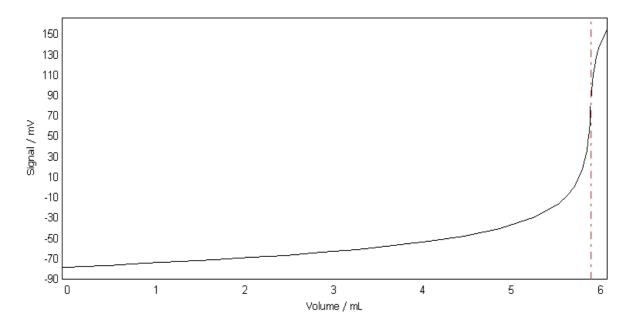
Volume mL	Increment mL	Signal mV	I Chang mV	e 1st deriv mV/mL	. Time	Temperature oC
0.000	0 NaN	-78.5	NaN	NaN	0	25.0
0.008	0.0080	-78.6	-0.1	NaN	3	25.0
0.016	0.0080	-78.6	0.0	NaN	6	25.0
0.036	0.0200	-78.6	0.0	NaN	9	25.0
0.086	0.0500	-78.4	0.2	NaN	12	25.0
0.211	0 0.1250	-77.8	0.6	4.06	15	25.0
0.523	5 0.3125	-76.5	1.3	4.30	18	25.0
0.923	5 0.4000	-74.7	1.8	4.45	21	25.0
1.323	5 0.4000	-72.9	1.8	4.66	24	25.0
1.723	5 0.4000	-70.9	2.0	5.04	27	25.0
2.123	5 0.4000	-68.8	2.1	5.54	30	25.0
2.523	5 0.4000	-66.5	2.3	6.15	34	25.0
2.923	5 0.4000	-63.8	2.7	6.92	36	25.0
3.323	5 0.4000	-60.7	3.1	7.79	40	25.0
3.723	5 0.4000	-57.2	3.5	8.98	43	25.0
4.123	5 0.4000	-52.9	4.3	11.58	46	25.0
4.523	5 0.4000	-47.5	5.4	16.74	49	25.0
4.923	5 0.4000	-40.2	7.3	27.27	52	25.0
5.323	5 0.4000	-29.2	11.0	51.35	55	25.0
5.591	0 0.2675	-16.1	13.1	88.96	58	25.0
5.695	5 0.1045	-7.4	8.7	125.64	61	25.0
5.758	0.0625	-0.3	7.1	168.99	64	25.0
5.816	0.0580	8.9	9.2	241.79	67	25.0
5.857	0.0410	18.1	9.2	349.88	70	25.0
5.885	0.0280	27.2	9.1	485.90	74	25.0
5.904	5 0.0195	35.9	8.7	636.41	78	25.0
5.919	0.0145	44.2	8.3	782.79	81	25.0
5.931	0 0.0120	55.0	10.8	910.16	85	25.0

AgNO3 7/25/2012 11:50:54 AM AgNO3

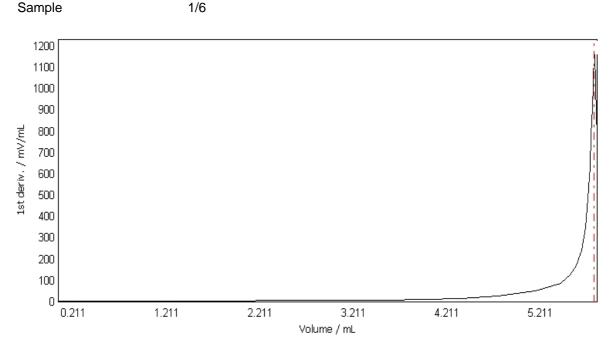
7/25/2012 11:17:32 AM

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	5.9390	0.0080	63.9	8.9	1023.69	90	25.0
	5.9470	0.0080	74.0	10.1	1173.04	94	25.0
EQP1	5.951190	NaN	79.4	NaN	1175.06	NaN	NaN
	5.9550	0.0080	84.3	10.3	1171.53	98	25.0
	5.9630	0.0080	94.0	9.7	1013.74	102	25.0
	5.9710	0.0080	102.3	8.3	885.59	105	25.0
	5.9810	0.0100	110.6	8.3	777.95	108	25.0
	5.9945	0.0135	119.0	8.4	NaN	111	25.0
	6.0135	0.0190	127.7	8.7	NaN	114	25.0
	6.0400	0.0265	136.2	8.5	NaN	118	25.0
	6.0805	0.0405	145.6	9.4	NaN	120	25.0
	6.1345	0.0540	154.4	8.8	NaN	124	25.0

E - V curve EQP titration [1] Sample 1/



dE/dV - V curve EQP titration [1]



AgNO3

Start time: 7/25/2012 11:50:54

AM

AgNO3

Raw data

Method:

Sample

2/6 No. Standard NaCl Type of standard solid

Comment

Titration stand Rondolino TTL 1 Weight m = 0.03608 g

Correction factor f = 1.0Purity p = 100.00 %Temperature T = 25.0 oC

Sample start 7/25/2012 11:56:52 AM Sample end 7/25/2012 12:02:38 PM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -80.1 mVNo. of EQPs and cand. nEQ = 1

VEQ1 = 6.175954 mLConsumption EQP1

Q1 = 0.594473 mmolEEQ1 = 77.6 mV

7/25/2012 11:17:32 AM

EHNV1 = -64.8 mV**Excess** VEX = 0.219046 mL

QEX = 0.021084 mmolVEND = 6.3950 mLEnd

QEND = 0.615557 mmol

Termination at **EQPs** Time t = 2:17 min

Calculation

Result R1 = 0.99966 -- Titer Formula R1=m/(VEQ*c*C)Constant M/(10*p*z)

C = 0.05844

M[NaCl] = 58.44 g/molMolar mass

Equivalent number z[NaCl] = 1Duration tUSE = 03:23 min

EQP titration [1] **Measured values**

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

DM141-SC Sensor Sample 2/6

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
0.0000	NaN	-80.1	NaN	NaN	0	25.0
0.0080	0.0080	-80.2	-0.1	NaN	3	25.0
0.0160	0.0080	-80.2	0.0	NaN	6	25.0
0.0360	0.0200	-80.2	0.0	NaN	9	25.0
0.0860	0.0500	-80.0	0.2	NaN	12	25.0
0.2110	0.1250	-79.5	0.5	3.79	15	25.0
0.5235	0.3125	-78.2	1.3	4.13	18	25.0
0.9235	0.4000	-76.5	1.7	4.30	21	25.0
1.3235	0.4000	-74.7	1.8	4.48	24	25.0
1.7235	0.4000	-72.8	1.9	4.85	27	25.0
2.1235	0.4000	-70.8	2.0	5.36	30	25.0
2.5235	0.4000	-68.6	2.2	6.00	34	25.0
2.9235	0.4000	-66.0	2.6	6.65	36	25.0
3.3235	0.4000	-63.0	3.0	7.41	40	25.0

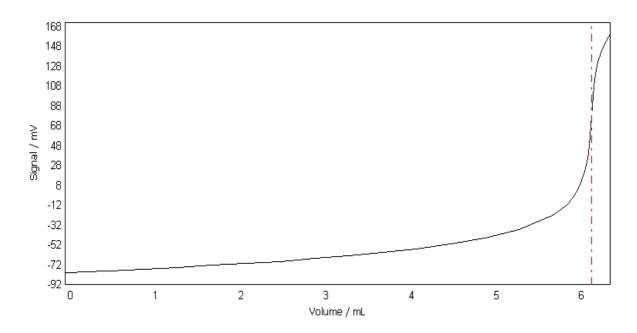
AgNO3 7/25/2012 11:50:54 AM

AgNO3

7/25/2012 11:17:32 AM

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	3.7235	0.4000	-59.7	3.3	8.17	43	25.0
						-	
	4.1235	0.4000	-55.9	3.8	9.85	46	25.0
	4.5235	0.4000	-51.4	4.5	13.36	49	25.0
	4.9235	0.4000	-45.2	6.2	20.29	52	25.0
	5.3235	0.4000	-36.6	8.6	35.25	55	25.0
	5.7235	0.4000	-22.4	14.2	71.14	58	25.0
	5.8845	0.1610	-11.7	10.7	108.74	61	25.0
	5.9560	0.0715	-4.4	7.3	148.13	64	25.0
	6.0140	0.0580	3.7	8.1	200.73	67	25.0
	6.0615	0.0475	12.5	8.8	285.67	70	25.0
	6.0975	0.0360	21.9	9.4	408.90	73	25.0
	6.1225	0.0250	31.2	9.3	565.54	76	25.0
	6.1390	0.0165	40.0	8.8	729.82	79	25.0
	6.1510	0.0120	48.8	8.8	862.43	82	25.0
	6.1600	0.0090	57.7	8.9	964.33	86	25.0
	6.1680	0.0080	67.5	9.8	1122.53	90	25.0
EQP1	6.175954	NaN	77.6	NaN	1225.80	NaN	NaN
	6.1760	0.0080	77.7	10.2	1225.79	93	25.0
	6.1840	0.0080	88.6	10.9	1132.18	97	25.0
	6.1920	0.0080	98.0	9.4	961.79	100	25.0
	6.2010	0.0090	106.6	8.6	852.05	103	25.0
	6.2125	0.0115	114.8	8.2	726.59	107	25.0
	6.2295	0.0170	124.3	9.5	NaN	110	25.0
	6.2500	0.0205	131.9	7.6	NaN	113	25.0
	6.2865	0.0365	141.6	9.7	NaN	116	25.0
	6.3330	0.0465	150.8	9.2	NaN	119	25.0
	6.3950	0.0620	159.7	8.9	NaN	122	25.0

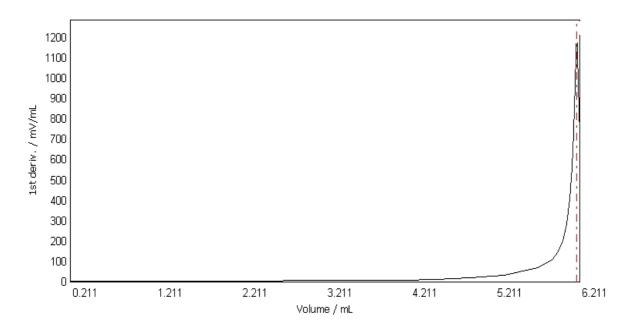
E - V curve EQP titration [1] Sample 2/6



Start time: 7/25/2012 11:50:54

ΑM

dE/dV - V curve EQP titration [1] Sample 2/6



Raw data

Sample

No. 3/6 Standard NaCl Type of standard solid

Comment

Titration stand Rondolino TTL 1 Weight m = 0.03813 g Correction factor f = 1.0

Purity p = 100.00 %Temperature T = 25.0 oC

Sample start 7/25/2012 12:02:38 PM Sample end 7/25/2012 12:08:30 PM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -80.3 mV No. of EQPs and cand. nEQ = 1

Consumption EQP1 VEQ1 = 6.510877 mL

Q1 = 0.626711 mmol

EEQ1 = 78.7 mV EHNV1 = -64.8 mV

Termination at EQPs
Time t = 2:22 min

Calculation

Result R1 = 1.00211 -- Titer Formula R1= $m/(VEQ^*c^*C)$ Constant $M/(10^*p^*z)$ C = 0.05844

Method: AgNO3 AgNO3 7/25/2012 11:17:32 AM

Start time: 7/25/2012 11:50:54

AM

Molar mass M[NaCl] = 58.44 g/mol

Equivalent number z[NaCl] = 1Duration tUSE = 03:29 min

Measured values EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

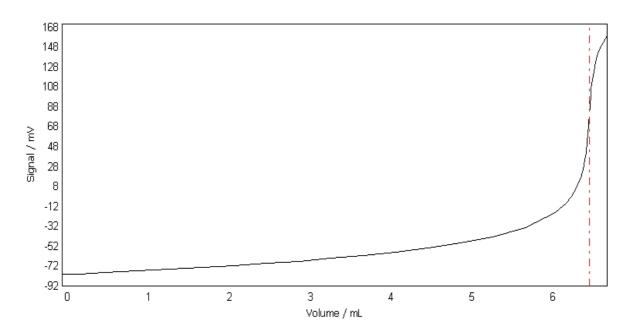
Sample 3/6

	Volume	Increment	Signal	Change	1st deriv.	Time	Temperature
	mL	mL	mV	mV	mV/mL	s	оС
	0.0000	NaN	-80.3	NaN	NaN	0	25.0
	0.0080	0.0080	-80.4	-0.1	NaN	3	25.0
	0.0160	0.0080	-80.4	0.0	NaN	6	25.0
	0.0360	0.0200	-80.3	0.1	NaN	9	25.0
	0.0860	0.0500	-80.2	0.1	NaN	12	25.0
	0.2110	0.1250	-79.7	0.5	3.58	15	25.0
	0.5235	0.3125	-78.5	1.2	3.87	18	25.0
	0.9235	0.4000	-76.9	1.6	4.06	21	25.0
	1.3235	0.4000	-75.2	1.7	4.31	24	25.0
	1.7235	0.4000	-73.4	1.8	4.62	27	25.0
	2.1235	0.4000	-71.5	1.9	5.03	30	25.0
	2.5235	0.4000	-69.4	2.1	5.57	34	25.0
	2.9235	0.4000	-67.0	2.4	6.11	36	25.0
	3.3235	0.4000	-64.4	2.6	6.78	40	25.0
	3.7235	0.4000	-61.4	3.0	7.58	43	25.0
	4.1235	0.4000	-58.0	3.4	8.39	46	25.0
	4.5235	0.4000	-54.2	3.8	10.43	49	25.0
	4.9235	0.4000	-49.1	5.1	14.53	52	25.0
	5.3235	0.4000	-42.6	6.5	22.44	55	25.0
	5.7235	0.4000	-33.3	9.3	39.74	58	25.0
	6.0980	0.3745	-18.4	14.9	78.33	61	25.0
	6.2295	0.1315	-8.7	9.7	114.69	64	25.0
	6.2960	0.0665	-1.7	7.0	154.21	67	25.0
	6.3560	0.0600	6.6	8.3	212.68	70	25.0
	6.4045	0.0485	16.8	10.2	308.17	73	25.0
	6.4335	0.0290	25.2	8.4	415.50	76	25.0
	6.4560	0.0225	34.1	8.9	544.89	79	25.0
	6.4725	0.0165	42.3	8.2	680.47	82	25.0
	6.4870	0.0145	52.6	10.3	819.05	86	25.0
	6.4960	0.0090	60.8	8.2	914.20	89	25.0
	6.5040	0.0080	70.1	9.3	1043.33	92	25.0
EQP1	6.510877	NaN	78.7	NaN	1125.56	NaN	NaN
	6.5120	0.0080	80.1	10.0	1125.36	97	25.0
	6.5200	0.0080	89.3	9.2	1028.68	100	25.0
	6.5285	0.0085	98.5	9.2	889.15	104	25.0
	6.5375	0.0090	106.3	7.8	795.60	107	25.0
	6.5505	0.0130	115.2	8.9	668.81	110	25.0
	6.5670	0.0165	123.6	8.4	NaN	113	25.0
	6.5905	0.0235	132.5	8.9	NaN	116	25.0
	6.6225	0.0320	141.4	8.9	NaN	119	25.0
	6.6670	0.0445	150.0	8.6	NaN	122	25.0
	6.7335	0.0665	158.9	8.9	NaN	125	25.0

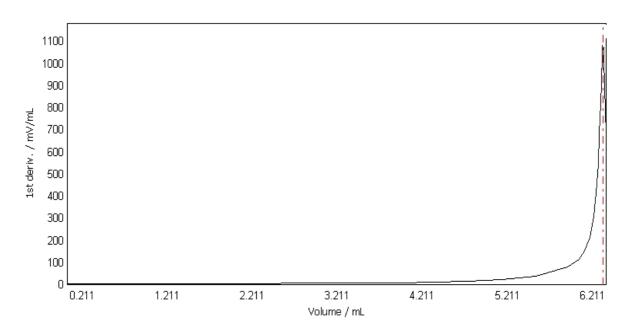
Start time: 7/25/2012 11:50:54

AM

E - V curve EQP titration [1] Sample 3.



dE/dV - V curve EQP titration [1] Sample 3/6



Raw data

Sample

No. 4/6 Standard NaCl Type of standard solid

Comment

 $\begin{array}{ll} \text{Titration stand} & \text{Rondolino TTL 1} \\ \text{Weight} & \text{m} = 0.03993 \text{ g} \\ \text{Correction factor} & \text{f} = 1.0 \\ \text{Purity} & \text{p} = 100.00 \% \\ \end{array}$

Method:

Serial No. B201599511

AgNO3

Start time: 7/25/2012 11:50:54

AM

AgNO3

Temperature T = 25.0 oC

Sample start 7/25/2012 12:08:30 PM Sample end 7/25/2012 12:14:27 PM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -82.5 mVNo. of EQPs and cand. nEQ = 1

Consumption EQP1 $VEQ1 = 6.822947 \, mL$

Q1 = 0.656750 mmol

7/25/2012 11:17:32 AM

EEQ1 = 78.4 mVEHNV1 = -67.3 mV $VEX = 0.170053 \, mL$ QEX = 0.016369 mmol

VEND = 6.9930 mLEnd

QEND = 0.673118 mmol

Termination at **EQPs** Time t = 2:25 min

Calculation

Excess

R1 = 1.00142 -- Titer Result Formula R1=m/(VEQ*c*C)Constant M/(10*p*z)

C = 0.05844

Molar mass M[NaCl] = 58.44 g/mol

Equivalent number z[NaCl] = 1Duration tUSE = 03:31 min

Measured values EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC Sample 4/6

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
0.0000	NaN	-82.5	NaN	NaN	0	25.0
0.0080	0.0080	-82.7	-0.2	NaN	3	25.0
0.0160	0.0080	-82.7	0.0	NaN	6	25.0
0.0360	0.0200	-82.6	0.1	NaN	9	25.0
0.0860	0.0500	-82.5	0.1	NaN	12	25.0
0.2110	0.1250	-82.0	0.5	3.36	15	25.0
0.5235	0.3125	-80.9	1.1	3.74	18	25.0
0.9235	0.4000	-79.3	1.6	3.87	21	25.0
1.3235	0.4000	-77.7	1.6	4.05	24	25.0
1.7235	0.4000	-76.0	1.7	4.27	27	25.0
2.1235	0.4000	-74.3	1.7	4.60	30	25.0
2.5235	0.4000	-72.4	1.9	5.03	34	25.0
2.9235	0.4000	-70.2	2.2	5.52	36	25.0
3.3235	0.4000	-67.9	2.3	6.12	40	25.0
3.7235	0.4000	-65.2	2.7	6.85	43	25.0
4.1235	0.4000	-62.2	3.0	7.69	46	25.0
4.5235	0.4000	-58.9	3.3	8.69	49	25.0
4.9235	0.4000	-54.6	4.3	11.07	52	25.0
5.3235	0.4000	-49.4	5.2	15.65	55	25.0
5.7235	0.4000	-42.5	6.9	24.84	58	25.0
6.1235	0.4000	-32.4	10.1	45.17	61	25.0
6.4410	0.3175	-18.4	14.0	83.65	64	25.0
6.5565	0.1155	-9.5	8.9	119.78	67	25.0
6.6245	0.0680	-1.9	7.6	163.78	70	25.0
6.6790	0.0545	6.2	8.1	225.34	73	25.0
6.7250	0.0460	15.7	9.5	329.88	76	25.0
6.7565	0.0315	25.7	10.0	475.67	80	25.0
6.7750	0.0185	33.8	8.1	626.18	83	25.0
6.7900	0.0150	42.9	9.1	781.17	86	25.0
6.8005	0.0105	51.0	8.1	886.56	89	25.0

AgNO3 7/25/2012 11:50:54

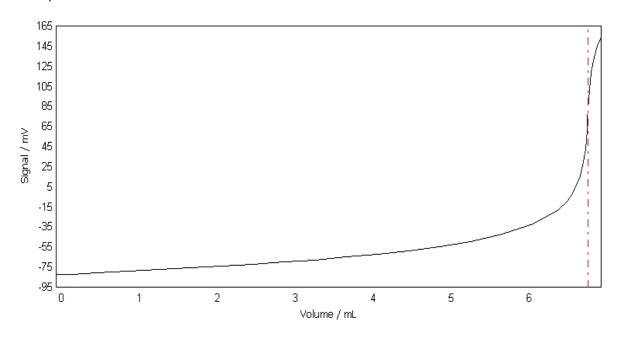
AM

AgNO3

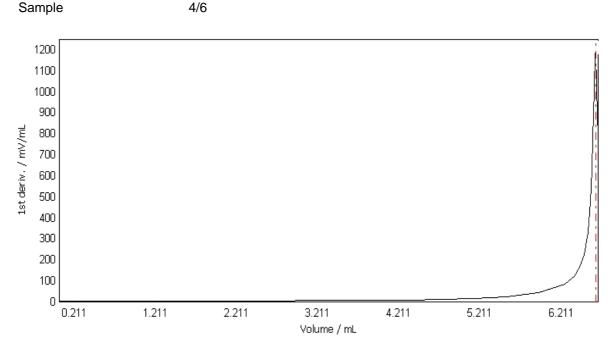
7/25/2012 11:17:32 AM

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	6.8100	0.0095	60.6	9.6	1014.49	93	25.0
	6.8180	0.0080	71.5	10.9	1180.79	98	25.0
EQP1	6.822947	NaN	78.4	NaN	1190.17	NaN	NaN
	6.8260	0.0080	82.6	11.1	1188.36	103	25.0
	6.8340	0.0080	92.4	9.8	1023.86	106	25.0
	6.8425	0.0085	101.1	8.7	893.56	110	25.0
	6.8530	0.0105	109.5	8.4	783.61	113	25.0
	6.8670	0.0140	118.5	9.0	NaN	116	25.0
	6.8850	0.0180	126.6	8.1	NaN	119	25.0
	6.9130	0.0280	136.2	9.6	NaN	122	25.0
	6.9475	0.0345	145.2	9.0	NaN	125	25.0
	6.9930	0.0455	153.5	8.3	NaN	128	25.0

E - V curve EQP titration [1] Sample 4/



dE/dV - V curve EQP titration [1]



AgNO3

AgNO3 Method: Start time: 7/25/2012 11:50:54

AM

Raw data

Sample

5/6 No. Standard NaCl Type of standard solid

Comment

Titration stand Rondolino TTL 1 Weight m = 0.03556 g

Correction factor f = 1.0Purity p = 100.00 %Temperature T = 25.0 oC

Sample start 7/25/2012 12:14:27 PM Sample end 7/25/2012 12:20:18 PM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -80.8 mVNo. of EQPs and cand. nEQ = 1

 $VEQ1 = 6.069610 \, mL$ Consumption EQP1

Q1 = 0.584236 mmol

7/25/2012 11:17:32 AM

EEQ1 = 78.4 mVEHNV1 = -65.3 mVVEX = 0.206390 mLQEX = 0.019866 mmol

VEND = 6.2760 mLQEND = 0.604103 mmol

Termination at **EQPs** Time t = 2:19 min

Calculation

Excess

End

Result R1 = 1.00251 -- Titer Formula R1=m/(VEQ*c*C)Constant M/(10*p*z)

C = 0.05844

M[NaCl] = 58.44 g/molMolar mass

z[NaCl] = 1Equivalent number Duration tUSE = 03:25 min

EQP titration [1] **Measured values**

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

DM141-SC Sensor Sample 5/6

olume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
0.0000	NaN	-80.8	NaN	NaN	0	25.0
0.0080	0.0080	-80.9	-0.1	NaN	3	25.0
0.0160	0.0080	-80.9	0.0	NaN	6	25.0
0.0360	0.0200	-80.8	0.1	NaN	9	25.0
0.0860	0.0500	-80.7	0.1	NaN	12	25.0
0.2110	0.1250	-80.1	0.6	3.97	15	25.0
0.5235	0.3125	-78.8	1.3	4.20	18	25.0
0.9235	0.4000	-77.1	1.7	4.38	21	25.0
1.3235	0.4000	-75.3	1.8	4.63	24	25.0
1.7235	0.4000	-73.3	2.0	5.02	27	25.0
2.1235	0.4000	-71.2	2.1	5.57	30	25.0
2.5235	0.4000	-68.9	2.3	6.26	34	25.0
2.9235	0.4000	-66.2	2.7	6.96	36	25.0
3.3235	0.4000	-63.1	3.1	7.76	40	25.0

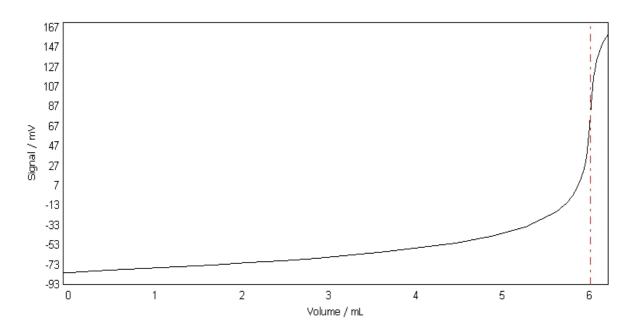
AgNO3 7/25/2012 11:50:54 AM

AgNO3

7/25/2012 11:17:32 AM

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	3.7235	0.4000	-59.6	3.5	8.56	43	25.0
	4.1235	0.4000	-55.5	4.1	10.63	46	25.0
	4.5235	0.4000	-50.7	4.8	14.80	49	25.0
	4.9235	0.4000	-44.0	6.7	23.21	52	25.0
	5.3235	0.4000	-34.5	9.5	41.93	55	25.0
	5.6775	0.3540	-19.7	14.8	81.83	58	25.0
	5.8020	0.1245	-10.3	9.4	119.05	61	25.0
	5.8680	0.0660	-2.9	7.4	162.60	64	25.0
	5.9215	0.0535	4.9	7.8	224.33	67	25.0
	5.9685	0.0470	15.0	10.1	328.24	70	25.0
	5.9975	0.0290	24.3	9.3	449.53	73	25.0
	6.0160	0.0185	32.1	7.8	573.96	76	25.0
	6.0325	0.0165	41.1	9.0	721.40	80	25.0
	6.0450	0.0125	51.1	10.0	855.41	84	25.0
	6.0530	0.0080	58.5	7.4	953.34	87	25.0
	6.0615	0.0085	67.4	8.9	1114.37	90	25.0
	6.0695	0.0080	78.3	10.9	1197.95	94	25.0
EQP1	6.069610	NaN	78.4	NaN	1197.96	NaN	NaN
	6.0775	0.0080	87.8	9.5	1107.73	97	25.0
	6.0860	0.0085	98.8	11.0	956.71	101	25.0
	6.0940	0.0080	106.3	7.5	860.39	105	25.0
	6.1075	0.0135	116.4	10.1	721.35	108	25.0
	6.1225	0.0150	124.4	8.0	NaN	111	25.0
	6.1460	0.0235	133.8	9.4	NaN	114	25.0
	6.1755	0.0295	142.6	8.8	NaN	117	25.0
	6.2170	0.0415	151.4	8.8	NaN	120	25.0
	6.2760	0.0590	159.8	8.4	NaN	123	25.0

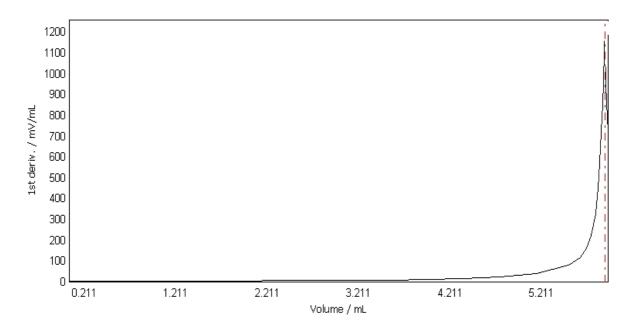
E - V curve EQP titration [1] Sample 5/6



Start time: 7/25/2012 11:50:54

ΑM

dE/dV - V curve EQP titration [1] Sample 5/6



Raw data

Sample

No. 6/6 Standard NaCl Type of standard solid

Comment

Titration stand Rondolino TTL 1 Weight m = 0.03677 g Correction factor f = 1.0

Purity p = 100.00 %Temperature T = 25.0 oC

Sample start 7/25/2012 12:20:19 PM Sample end 7/25/2012 12:24:05 PM

EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

Start potential EST = -79.9 mVNo. of EQPs and cand. nEQ = 1

Consumption EQP1 VEQ1 = 6.263138 mL

Q1 = 0.602865 mmol

EEQ1 = 76.4 mV EHNV1 = -64.3 mV VEX = 0.185862 mL QEX = 0.017890 mmol

End VEND = 6.4490 mL QEND = 0.620755 mmol

Termination at EQPs Time t = 2:19 min

Calculation

Excess

Result R1 = 1.00460 -- Titer Formula R1= $m/(VEQ^*c^*C)$ Constant $M/(10^*p^*z)$ C = 0.05844

Start time: 7/25/2012 11:50:54

ΑM

Molar mass M[NaCl] = 58.44 g/mol

Equivalent number z[NaCl] = 1Duration tUSE = 03:24 min

Measured values EQP titration [1]

Titrant AgNO3 c = 0.1 mol/L TITER = 0.96256

Sensor DM141-SC

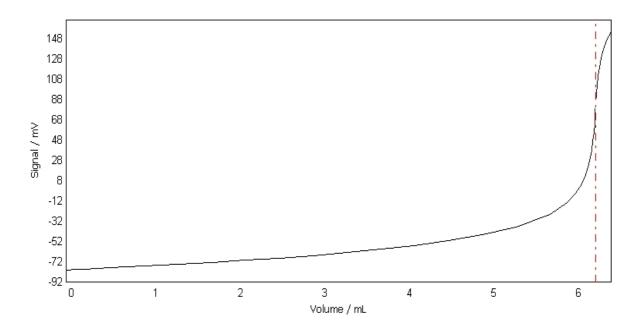
Sample 6/6

	Volume	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	mL						
	0.0000	NaN	-79.9	NaN	NaN	0	25.0
	0.0080	0.0080	-80.0	-0.1	NaN	3	25.0
	0.0160	0.0080	-80.0	0.0	NaN	6	25.0
	0.0360	0.0200	-80.0	0.0	NaN	9	25.0
	0.0860	0.0500	-79.8	0.2	NaN	12	25.0
	0.2110	0.1250	-79.3	0.5	3.82	15	25.0
	0.5235	0.3125	-78.0	1.3	4.12	18	25.0
	0.9235	0.4000	-76.3	1.7	4.35	21	25.0
	1.3235	0.4000	-74.5	1.8	4.57	24	25.0
	1.7235	0.4000	-72.6	1.9	4.90	27	25.0
	2.1235	0.4000	-70.5	2.1	5.37	30	25.0
	2.5235	0.4000	-68.3	2.2	5.96	34	25.0
	2.9235	0.4000	-65.8	2.5	6.58	36	25.0
	3.3235	0.4000	-62.9	2.9	7.28	40	25.0
	3.7235	0.4000	-59.6	3.3	8.05	43	25.0
	4.1235	0.4000	-55.9	3.7	9.53	46	25.0
	4.5235	0.4000	-51.6	4.3	12.48	49	25.0
	4.9235	0.4000	-45.8	5.8	18.41	52	25.0
	5.3235	0.4000	-37.8	8.0	30.91	55	25.0
	5.7235	0.4000	-25.2	12.6	60.30	58	25.0
	5.9250	0.2015	-14.1	11.1	95.77	61	25.0
	6.0190	0.0940	-5.7	8.4	132.53	64	25.0
	6.0815	0.0625	1.8	7.5	179.24	67	25.0
	6.1375	0.0560	10.8	9.0	257.58	70	25.0
	6.1795	0.0420	21.0	10.2	376.59	73	25.0
	6.2040	0.0245	30.2	9.2	509.51	76	25.0
	6.2195	0.0155	37.7	7.5	635.99	80	25.0
	6.2340	0.0145	47.2	9.5	776.17	83	25.0
	6.2440	0.0100	55.3	8.1	871.83	87	25.0
	6.2530	0.0090	64.0	8.7	1002.80	90	25.0
	6.2610	0.0080	73.5	9.5	1129.38	93	25.0
QP1	6.263138	NaN	76.4	NaN	1130.19	NaN	NaN
	6.2690	0.0080	84.3	10.8	1098.35	97	25.0
	6.2770	0.0080	93.5	9.2	963.68	101	25.0
	6.2860	0.0090	102.1	8.6	848.05	105	25.0
	6.2975	0.0115	111.0	8.9	738.02	108	25.0
	6.3120	0.0145	119.5	8.5	NaN	111	25.0
	6.3325	0.0205	128.6	9.1	NaN	114	25.0
	6.3590	0.0265	137.2	8.6	NaN	117	25.0
	6.3975	0.0385	146.3	9.1	NaN	120	25.0
	6.4490	0.0515	154.7	8.4	NaN	123	25.0

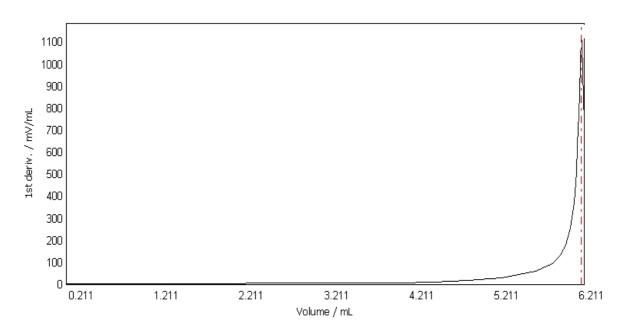
Start time: 7/25/2012 11:50:54

ΑM

E - V curve EQP titration [1]Sample 6/6



dE/dV - V curve EQP titration [1]Sample 6/6



Raw data

Calculation

Result R2 = 1.00258 -- Mean Titer

Formula R2=Mean[R1]

Constant 1

C = 1

METTLER TOLEDO T90 3.1.4 T90 GN / Excellence Titrator

AgNO3

Serial No. B201599511

7/25/2012 11:17:32 AM

Start time: 7/25/2012 11:50:54

AM

AgNO3

Titer

Method:

AgNO3 c = 0.1 mol/LTitrant

1.00258 Titer

- (1) Modified (2) Excluded
- (3) Outside limits
- (4) Resource expired
- (5) srel above max srel
- (6) srel above max srel for multiple determination (7) Value outside limits, not saved in setup
- (8) Sample data outside limits
- (9) Standard evaluation used
- (10) Result from buffer

Created: - (Administrator), 7/25/2012 11:56:51 AM

LabX 3.1.1 / admin Page 16 of 16 7/25/2012 1:42:25 PM