Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		

Sample data

No.	Comment / ID	Start time	Sample size	Corr. f	Density
1/6	TRIS	7/16/2012 11:47:20 AM	0.06463 g	1.0	0 g/mL
2/6	TRIS	7/16/2012 11:52:57 AM	0.06493 g	1.0	0 g/mL
3/6	TRIS	7/16/2012 11:58:34 AM	0.06604 g	1.0	0 g/mL
4/6	TRIS	7/16/2012 12:04:13 PM	0.06581 g	1.0	0 g/mL
5/6	TRIS	7/16/2012 12:09:52 PM	0.06725 g	1.0	0 g/mL
6/6	TRIS	7/16/2012 12:15:32 PM	0.06784 g	1.0	0 g/mL

Results

No.	Comment / ID	Start time	Sample size and results		
1/6	TRIS	7/16/2012 11:47:20 AM	0.06463	g	
			R1 = 1.00306		Titer
2/6	TRIS	7/16/2012 11:52:57 AM	0.06493	g	
			R1 = 1.00556		Titer
3/6	TRIS	7/16/2012 11:58:34 AM	0.06604	g	
			R1 = 1.00684		Titer
4/6	TRIS	7/16/2012 12:04:13 PM	0.06581	g	
			R1 = 1.00426		Titer
5/6	TRIS	7/16/2012 12:09:52 PM	0.06725	g	
			R1 = 1.00666		Titer
6/6	TRIS	7/16/2012 12:15:32 PM	0.06784	g	
			R1 = 1.00580		Titer
-/-			R2 = 1.0054	--	Mean Titer

Titer

Titer	1.00536

Series comment

Statistics

Rx	Name	n	Mean value	Unit	s	srel [%]
R1	Titer	6	1.00536		0.00146	0.145
R2	Mean Titer	1	1.0054	--	NaN	NaN

Raw data

Sample

No.	1/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06463 g
Correction factor	f = 1.0

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 11:47:20 AM
Sample end	7/16/2012 11:52:57 AM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247		
Sensor	DG111-SC		
Start potential		EST =	-115.3 mV
No. of EQPs and cand.		nEQ =	1
Consumption	EQP1	VEQ1 =	5.318853 mL
		Q1 =	0.533199 mmol
		EEQ1 =	138.7 mV
		EHNV1 =	-31.8 mV
Excess		VEX =	1.550647 mL
		QEX =	0.155448 mmol
End		VEND =	6.8695 mL
		QEND =	0.688647 mmol
Termination at	EQPs		
Time	t = 2:10 min		

Calculation

Result	R1 = 1.00306 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114
Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1
Duration	tUSE = 04:43 min

Measured values EQP titration [1]

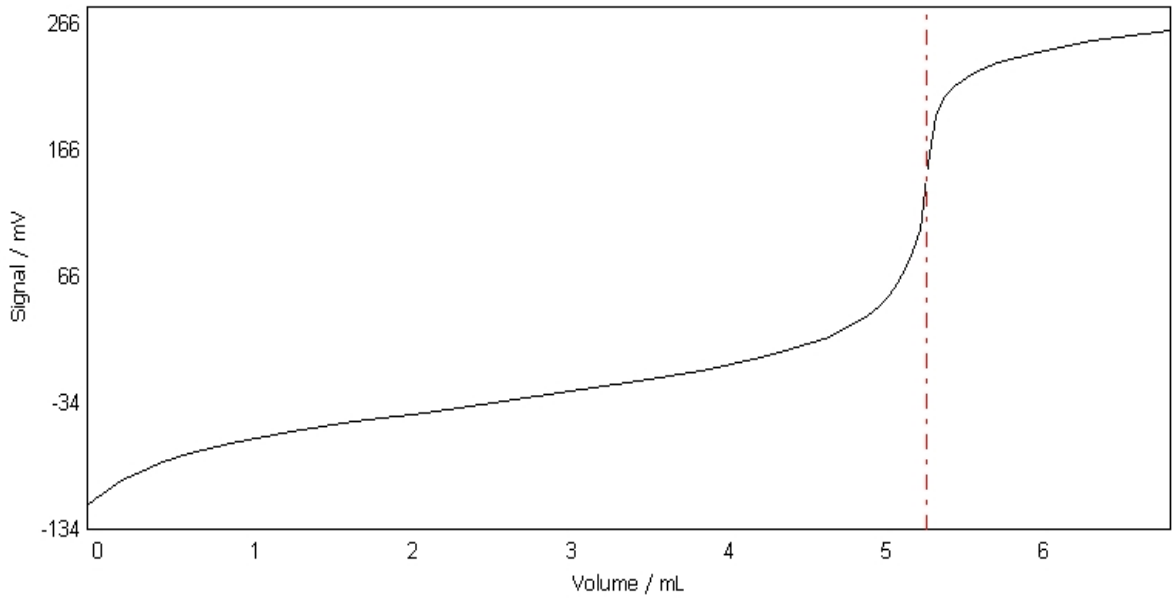
Titrant	HCl c = 0.1 mol/L TITER = 1.00247
Sensor	DG111-SC
Sample	1/6

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	0.0000	NaN	-115.3	NaN	NaN	0	25.0
	0.0500	0.0500	-109.9	5.4	NaN	3	25.0
	0.1000	0.0500	-105.7	4.2	NaN	6	25.0
	0.2175	0.1175	-95.8	9.9	NaN	9	25.0
	0.3140	0.0965	-89.6	6.2	NaN	12	25.0
	0.4775	0.1635	-80.6	9.0	51.00	16	25.0
	0.6490	0.1715	-73.6	7.0	41.35	19	25.0
	0.9110	0.2620	-65.9	7.7	31.28	22	25.0
	1.2910	0.3800	-56.7	9.2	23.34	25	25.0
	1.6900	0.3990	-48.4	8.3	19.11	28	25.0
	2.1395	0.4495	-41.6	6.8	16.75	31	25.0
	2.6395	0.5000	-32.1	9.5	16.46	34	25.0
	2.9935	0.3540	-26.0	6.1	17.18	37	25.0
	3.4935	0.5000	-16.8	9.2	20.41	40	25.0
	3.8965	0.4030	-8.8	8.0	25.85	43	25.0
	4.2740	0.3775	2.1	10.9	35.17	46	25.0
	4.4625	0.1885	7.9	5.8	43.67	49	25.0
	4.7100	0.2475	18.3	10.4	63.88	53	25.0
	4.8480	0.1380	26.8	8.5	85.43	56	25.0
	4.9375	0.0895	33.8	7.0	109.33	59	25.0
	5.0180	0.0805	41.6	7.8	138.95	62	25.0
	5.0850	0.0670	51.6	10.0	195.24	65	25.0
	5.1350	0.0500	60.1	8.5	229.30	68	25.0
	5.1850	0.0500	71.2	11.1	322.38	73	25.0
	5.2350	0.0500	85.4	14.2	479.60	77	25.0
	5.2850	0.0500	103.5	18.1	562.76	80	25.0
EQP1	5.318853	NaN	138.7	NaN	571.15	NaN	NaN
	5.3350	0.0500	155.5	52.0	487.13	88	25.0

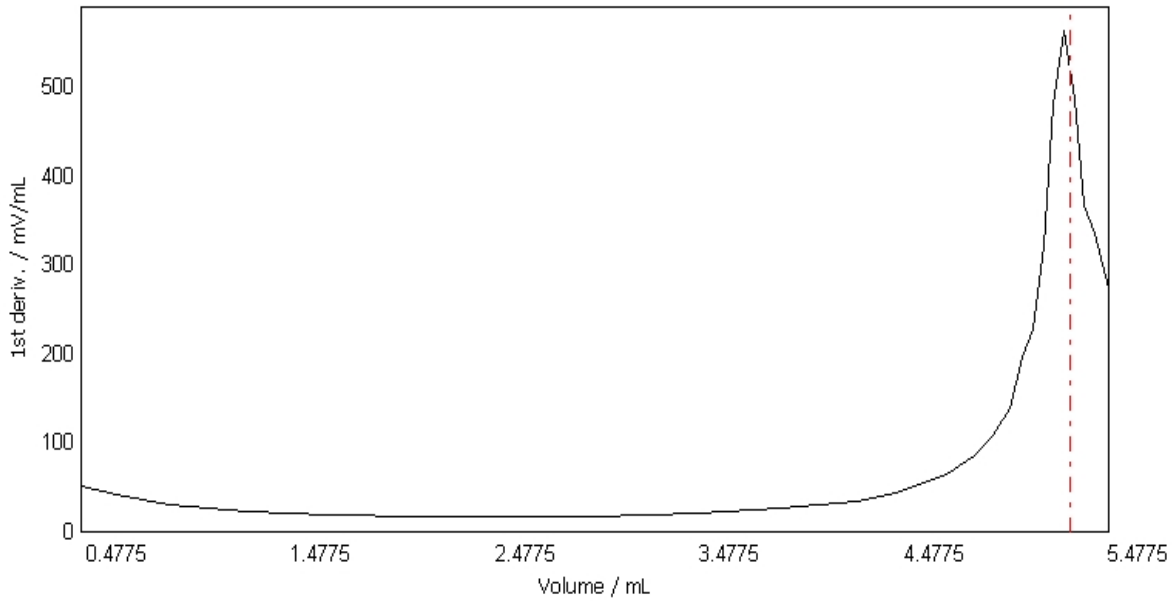
Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
5.3850	0.0500	192.2	36.7	367.62	92	25.0
5.4350	0.0500	206.8	14.6	334.85	95	25.0
5.5040	0.0690	216.2	9.4	273.37	98	25.0
5.6290	0.1250	227.3	11.1	NaN	101	25.0
5.7690	0.1400	234.6	7.3	NaN	104	25.0
6.0260	0.2570	243.6	9.0	NaN	107	25.0
6.3705	0.3445	251.7	8.1	NaN	110	25.0
6.8695	0.4990	259.8	8.1	NaN	113	25.0

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



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



Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		

Raw data

Sample

No.	2/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06493 g
Correction factor	f = 1.0
Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 11:52:57 AM
Sample end	7/16/2012 11:58:33 AM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247	
Sensor	DG111-SC	
Start potential		EST = -114.9 mV
No. of EQPs and cand.		nEQ = 1
Consumption	EQP1	VEQ1 = 5.330299 mL
		Q1 = 0.534346 mmol
		EEQ1 = 137.1 mV
		EHNV1 = -30.8 mV
Excess		VEX = 1.478701 mL
		QEX = 0.148235 mmol
End		VEND = 6.8090 mL
		QEND = 0.682582 mmol
Termination at	EQPs	
Time	t = 2:10 min	

Calculation

Result	R1 = 1.00556 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114
Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1
Duration	tUSE = 04:43 min

Measured values EQP titration [1]

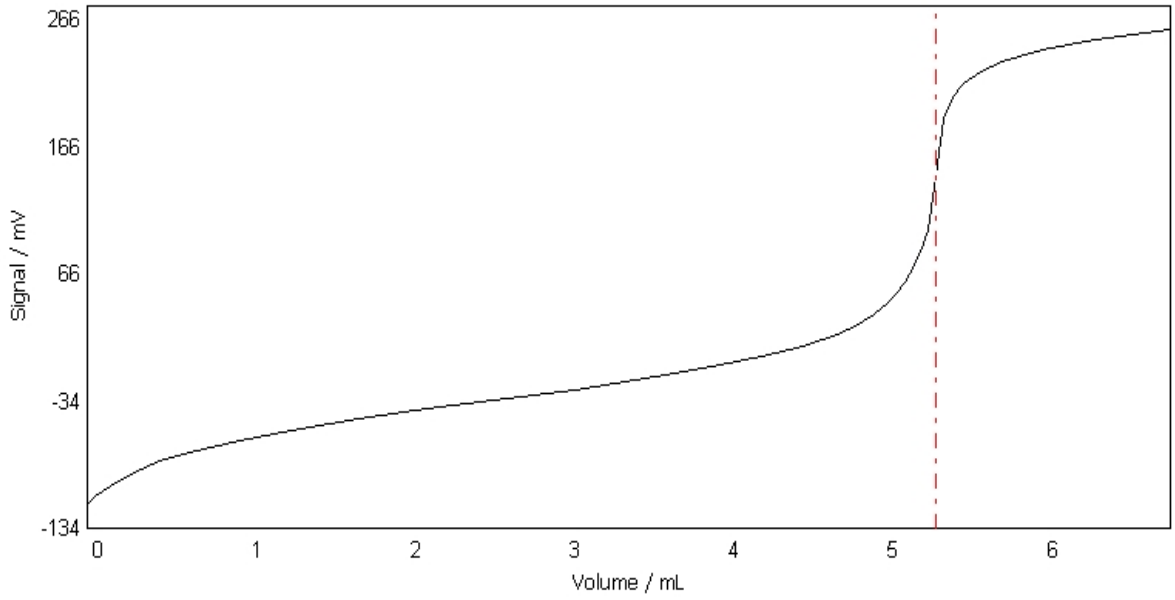
Titrant	HCl c = 0.1 mol/L TITER = 1.00247
Sensor	DG111-SC
Sample	2/6

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
0.0000	NaN	-114.9	NaN	NaN	0	25.0
0.0500	0.0500	-109.4	5.5	NaN	3	25.0
0.1000	0.0500	-105.0	4.4	NaN	6	25.0
0.2175	0.1175	-96.1	8.9	NaN	9	25.0
0.3365	0.1190	-87.5	8.6	NaN	12	25.0
0.4555	0.1190	-80.9	6.6	52.17	15	25.0
0.6400	0.1845	-74.0	6.9	41.72	18	25.0
0.9555	0.3155	-64.4	9.6	30.61	22	25.0
1.2820	0.3265	-56.6	7.8	24.06	24	25.0
1.7025	0.4205	-47.7	8.9	19.21	28	25.0
2.1350	0.4325	-40.2	7.5	16.84	31	25.0
2.6350	0.5000	-31.3	8.9	16.13	34	25.0
3.0665	0.4315	-24.7	6.6	16.94	37	25.0
3.5665	0.5000	-15.3	9.4	20.67	40	25.0
3.9280	0.3615	-7.3	8.0	25.88	43	25.0
4.2340	0.3060	0.6	7.9	33.55	46	25.0

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

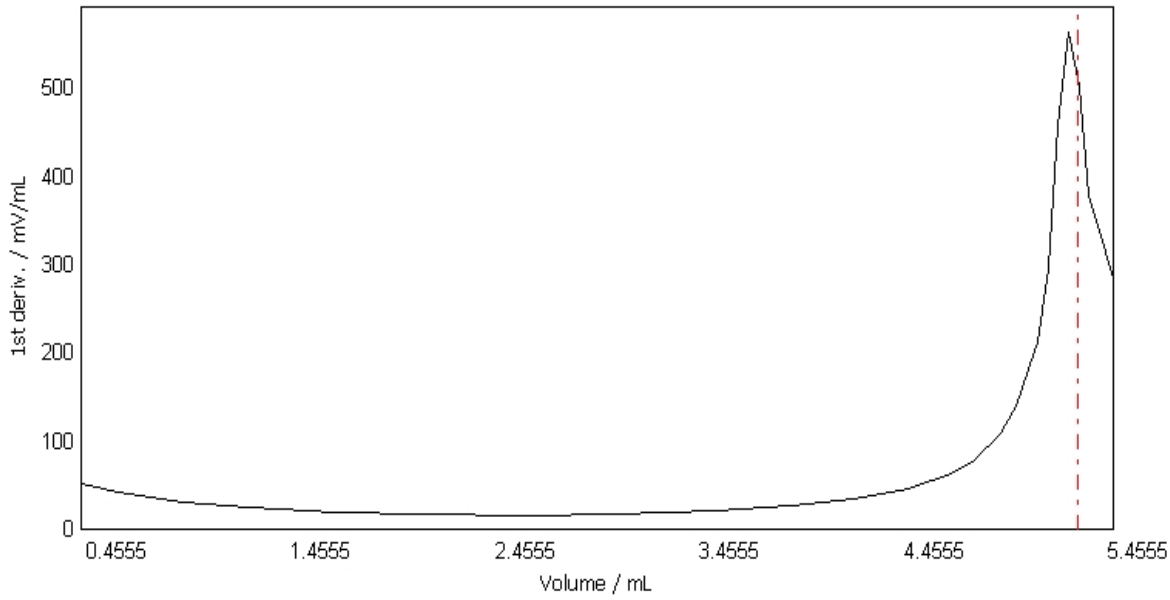
	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	4.5020	0.2680	8.9	8.3	45.31	49	25.0
	4.7140	0.2120	18.9	10.0	62.86	52	25.0
	4.8260	0.1120	25.1	6.2	79.19	55	25.0
	4.9510	0.1250	34.5	9.4	109.00	58	25.0
	5.0290	0.0780	42.4	7.9	139.60	62	25.0
	5.0870	0.0580	50.2	7.8	180.96	65	25.0
	5.1370	0.0500	59.4	9.2	212.72	69	25.0
	5.1870	0.0500	69.9	10.5	296.89	73	25.0
	5.2370	0.0500	83.0	13.1	458.32	78	25.0
	5.2870	0.0500	100.6	17.6	564.28	81	25.0
EQP1	5.330299	NaN	137.1	NaN	576.30	NaN	NaN
	5.3370	0.0500	142.8	42.2	501.43	89	25.0
	5.3870	0.0500	188.6	45.8	378.20	92	25.0
	5.4370	0.0500	205.0	16.4	338.88	95	25.0
	5.5055	0.0685	215.7	10.7	283.95	98	25.0
	5.6140	0.1085	225.8	10.1	NaN	101	25.0
	5.7560	0.1420	233.7	7.9	NaN	104	25.0
	6.0005	0.2445	242.6	8.9	NaN	107	25.0
	6.3340	0.3335	250.8	8.2	NaN	110	25.0
	6.8090	0.4750	258.8	8.0	NaN	113	25.0

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



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

Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		



Raw data

Sample

No.	3/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06604 g
Correction factor	f = 1.0
Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 11:58:34 AM
Sample end	7/16/2012 12:04:13 PM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247	
Sensor	DG111-SC	
Start potential		EST = -115.0 mV
No. of EQPs and cand.		nEQ = 1
Consumption	EQP1	VEQ1 = 5.414503 mL
		Q1 = 0.542788 mmol
		EEQ1 = 136.4 mV
		EHNV1 = -30.7 mV
Excess		VEX = 1.406497 mL
		QEX = 0.140997 mmol
End		VEND = 6.8210 mL
		QEND = 0.683785 mmol
Termination at	EQPs	
Time	t = 2:12 min	

Calculation

Result	R1 = 1.00684 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114
Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Duration tUSE = 04:45 min

Measured values EQP titration [1]

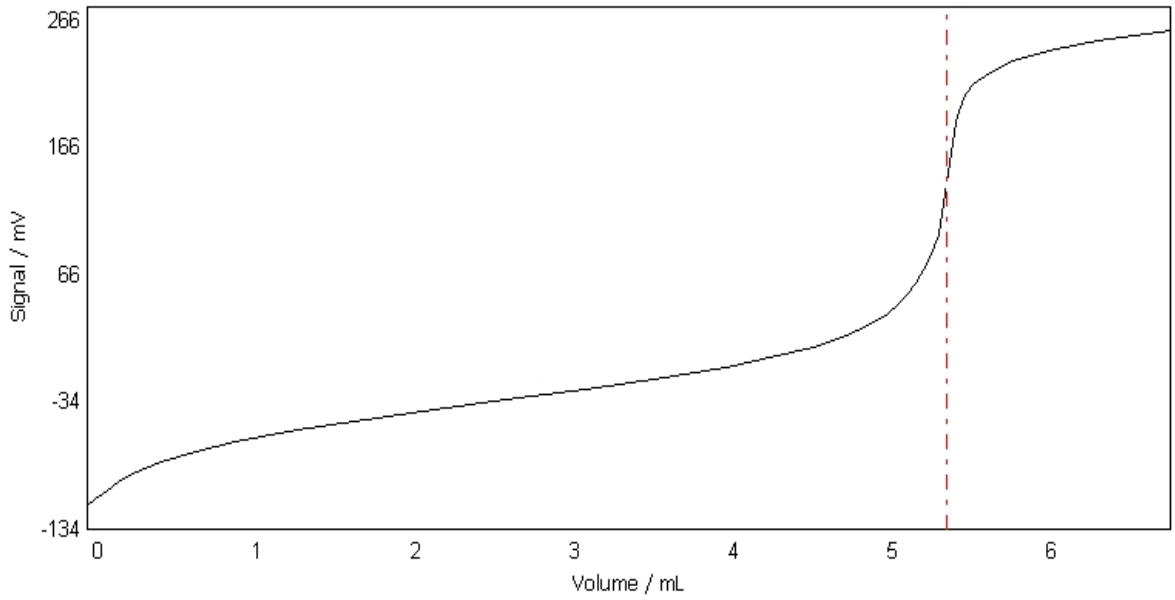
Titrant HCl c = 0.1 mol/L TITER = 1.00247
Sensor DG111-SC
Sample 3/6

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	0.0000	NaN	-115.0	NaN	NaN	0	25.0
	0.0500	0.0500	-109.7	5.3	NaN	3	25.0
	0.1000	0.0500	-105.6	4.1	NaN	6	25.0
	0.2250	0.1250	-94.7	10.9	NaN	9	25.0
	0.3115	0.0865	-89.0	5.7	NaN	12	25.0
	0.4685	0.1570	-81.1	7.9	51.28	15	25.0
	0.6835	0.2150	-72.5	8.6	39.60	18	25.0
	0.9305	0.2470	-65.4	7.1	31.41	21	25.0
	1.3180	0.3875	-55.7	9.7	23.51	25	25.0
	1.6825	0.3645	-48.7	7.0	19.40	28	25.0
	2.1825	0.5000	-39.6	9.1	16.40	31	25.0
	2.6365	0.4540	-31.8	7.8	15.76	34	25.0
	3.1350	0.4985	-24.0	7.8	16.77	37	25.0
	3.6350	0.5000	-14.9	9.1	20.47	40	25.0
	4.0210	0.3860	-6.7	8.2	26.09	43	25.0
	4.3450	0.3240	2.1	8.8	34.57	46	25.0
	4.5725	0.2275	9.5	7.4	44.71	49	25.0
	4.7800	0.2075	18.4	8.9	60.69	52	25.0
	4.9205	0.1405	26.3	7.9	80.30	55	25.0
	5.0300	0.1095	34.4	8.1	106.43	58	25.0
	5.1120	0.0820	43.4	9.0	135.58	61	25.0
	5.1620	0.0500	49.8	6.4	170.40	64	25.0
	5.2160	0.0540	58.9	9.1	206.05	67	25.0
	5.2660	0.0500	69.1	10.2	280.75	71	25.0
	5.3160	0.0500	81.7	12.6	436.86	76	25.0
	5.3660	0.0500	96.8	15.1	568.81	80	25.0
EQP1	5.414503	NaN	136.4	NaN	583.69	NaN	NaN
	5.4160	0.0500	137.6	40.8	511.81	90	25.0
	5.4660	0.0500	186.7	49.1	388.04	94	25.0
	5.5160	0.0500	204.3	17.6	340.74	97	25.0
	5.5790	0.0630	214.7	10.4	295.43	100	25.0
	5.6825	0.1035	224.5	9.8	NaN	103	25.0
	5.8300	0.1475	233.2	8.7	NaN	106	25.0
	6.0500	0.2200	241.7	8.5	NaN	109	25.0
	6.3615	0.3115	249.8	8.1	NaN	112	25.0
	6.8210	0.4595	257.8	8.0	NaN	115	25.0

E - V curve EQP titration [1]

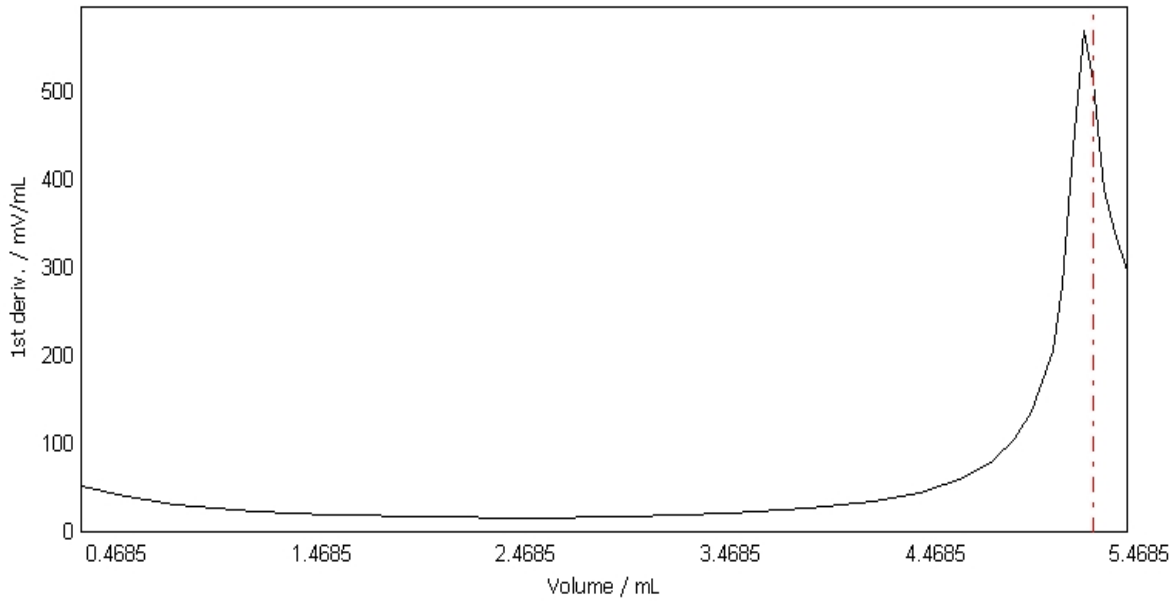
Sample 3/6

Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		



dE/dV - V curve **EQP titration [1]**

Sample 3/6



Raw data

Sample

No.	4/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06581 g
Correction factor	f = 1.0
Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 12:04:13 PM

Method: TiterHCL Titer 0.1 mol/LHCl 7/16/2012 10:22:29 AM
Start time: 7/16/2012 11:47:20 AM

Sample end 7/16/2012 12:09:52 PM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247	
Sensor	DG111-SC	
Start potential		EST = -114.8 mV
No. of EQPs and cand.		nEQ = 1
Consumption	EQP1	VEQ1 = 5.409530 mL
		Q1 = 0.542289 mmol
		EEQ1 = 135.3 mV
		EHNV1 = -31.5 mV
Excess		VEX = 1.364970 mL
		QEX = 0.136834 mmol
End		VEND = 6.7745 mL
		QEND = 0.679123 mmol
Termination at	EQPs	
Time	t = 2:10 min	

Calculation

Result	R1 = 1.00426 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114
Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1
Duration	tUSE = 04:43 min

Measured values EQP titration [1]

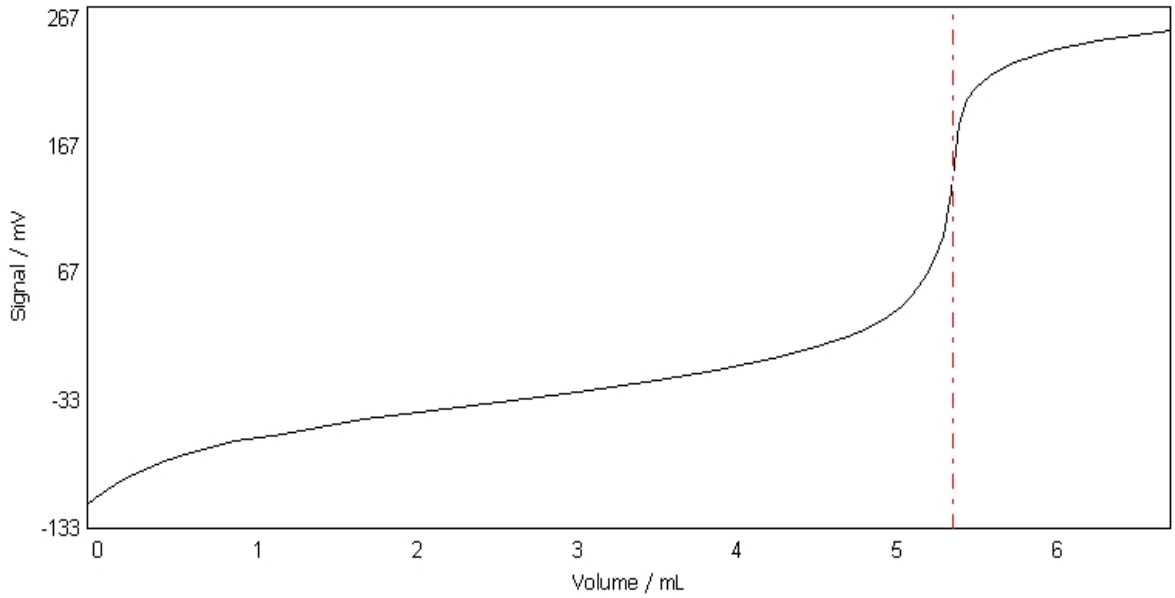
Titrant	HCl c = 0.1 mol/L TITER = 1.00247
Sensor	DG111-SC
Sample	4/6

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	0.0000	NaN	-114.8	NaN	NaN	0	25.0
	0.0500	0.0500	-109.8	5.0	NaN	3	25.0
	0.1000	0.0500	-105.3	4.5	NaN	6	25.0
	0.1995	0.0995	-96.5	8.8	NaN	9	25.0
	0.2895	0.0900	-91.0	5.5	NaN	12	25.0
	0.4800	0.1905	-80.6	10.4	49.67	16	25.0
	0.6455	0.1655	-74.1	6.5	41.11	19	25.0
	0.9275	0.2820	-65.0	9.1	31.18	22	25.0
	1.2290	0.3015	-58.8	6.2	24.61	25	25.0
	1.7290	0.5000	-47.8	11.0	18.48	28	25.0
	2.0760	0.3470	-41.9	5.9	16.73	31	25.0
	2.5760	0.5000	-33.5	8.4	15.85	34	25.0
	3.0640	0.4880	-25.8	7.7	16.77	38	25.0
	3.5640	0.5000	-16.5	9.3	19.97	41	25.0
	3.9370	0.3730	-8.8	7.7	24.77	44	25.0
	4.2875	0.3505	0.4	9.2	33.02	47	25.0
	4.5260	0.2385	7.6	7.2	42.43	50	25.0
	4.7530	0.2270	17.3	9.7	58.28	53	25.0
	4.8875	0.1345	24.3	7.0	75.76	56	25.0
	5.0120	0.1245	33.2	8.9	103.89	59	25.0
	5.0945	0.0825	41.2	8.0	133.73	62	25.0
	5.1550	0.0605	49.1	7.9	172.73	65	25.0
	5.2050	0.0500	57.3	8.2	206.69	69	25.0
	5.2550	0.0500	68.1	10.8	275.56	73	25.0
	5.3050	0.0500	80.8	12.7	420.30	77	25.0
	5.3550	0.0500	97.2	16.4	558.79	80	25.0
	5.4050	0.0500	130.4	33.2	524.97	88	25.0
EQP1	5.409530	NaN	135.3	NaN	573.77	NaN	NaN
	5.4550	0.0500	184.0	53.6	392.76	92	25.0
	5.5050	0.0500	203.3	19.3	341.20	95	25.0
	5.5620	0.0570	212.8	9.5	304.71	98	25.0
	5.6750	0.1130	224.3	11.5	NaN	101	25.0

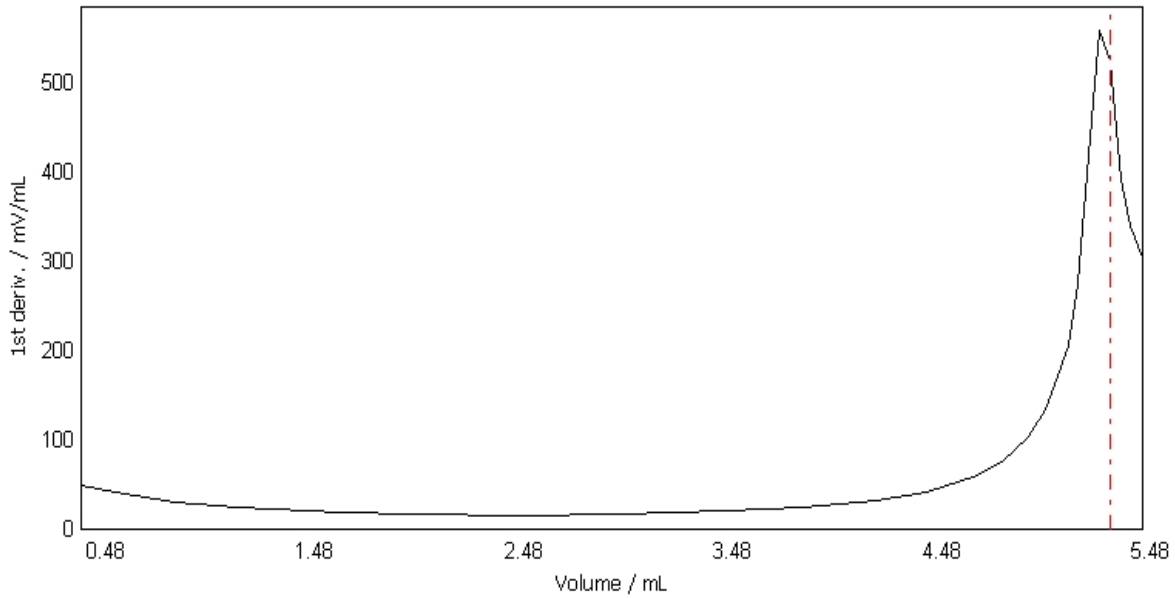
Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
5.8025	0.1275	232.0	7.7	NaN	104	25.0
6.0265	0.2240	241.1	9.1	NaN	107	25.0
6.3215	0.2950	249.0	7.9	NaN	110	25.0
6.7745	0.4530	257.2	8.2	NaN	114	25.0

E - V curve **EQP titration [1]**
Sample 4/6



dE/dV - V curve **EQP titration [1]**
Sample 4/6



Raw data

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Sample

No.	5/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06725 g
Correction factor	f = 1.0
Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 12:09:52 PM
Sample end	7/16/2012 12:15:31 PM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247	
Sensor	DG111-SC	
Start potential		EST = -115.4 mV
No. of EQPs and cand.		nEQ = 1
Consumption	EQP1	VEQ1 = 5.514700 mL
		Q1 = 0.552832 mmol
		EEQ1 = 134.4 mV
		EHNV1 = -31.5 mV
Excess		VEX = 1.325300 mL
		QEX = 0.132857 mmol
End		VEND = 6.8400 mL
		QEND = 0.685689 mmol
Termination at	EQPs	
Time	t = 2:10 min	

Calculation

Result	R1 = 1.00666 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114
Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1
Duration	tUSE = 04:42 min

Measured values EQP titration [1]

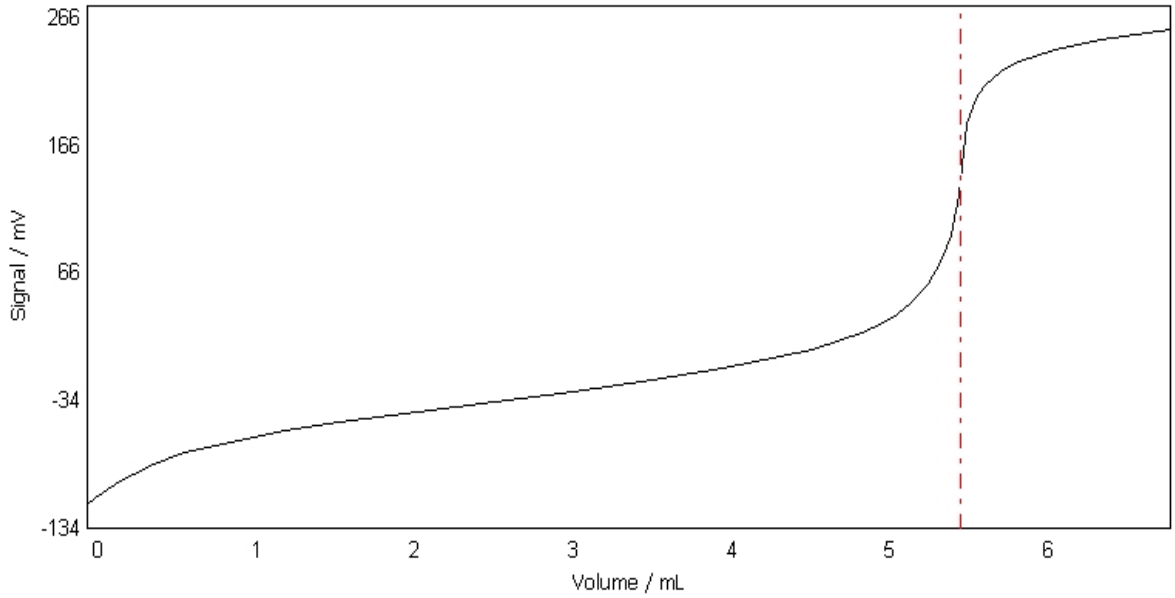
Titrant	HCl c = 0.1 mol/L TITER = 1.00247
Sensor	DG111-SC
Sample	5/6

Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
0.0000	NaN	-115.4	NaN	NaN	0	25.0
0.0500	0.0500	-110.8	4.6	NaN	3	25.0
0.1000	0.0500	-105.9	4.9	NaN	6	25.0
0.1785	0.0785	-99.3	6.6	NaN	10	25.0
0.2880	0.1095	-91.4	7.9	NaN	13	25.0
0.4180	0.1300	-84.3	7.1	54.91	16	25.0
0.6120	0.1940	-75.2	9.1	43.08	19	25.0
0.8085	0.1965	-69.4	5.8	34.90	22	25.0
1.2460	0.4375	-58.0	11.4	24.20	25	25.0
1.5875	0.3415	-51.5	6.5	19.95	28	25.0
2.0875	0.5000	-42.7	8.8	16.28	31	25.0
2.5770	0.4895	-34.4	8.3	15.54	34	25.0
3.0655	0.4885	-26.5	7.9	16.07	37	25.0
3.5655	0.5000	-18.0	8.5	18.99	40	25.0
4.0135	0.4480	-9.3	8.7	24.45	43	25.0
4.3795	0.3660	0.8	10.1	32.64	46	25.0
4.5825	0.2030	6.2	5.4	40.19	50	25.0
4.8940	0.3115	18.7	12.5	61.43	53	25.0

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	5.0265	0.1325	26.5	7.8	81.92	56	25.0
	5.1185	0.0920	33.6	7.1	104.81	59	25.0
	5.1970	0.0785	41.9	8.3	131.47	62	25.0
	5.2530	0.0560	48.8	6.9	164.83	65	25.0
	5.3085	0.0555	56.9	8.1	192.21	68	25.0
	5.3585	0.0500	68.0	11.1	263.29	72	25.0
	5.4085	0.0500	80.0	12.0	415.38	76	25.0
	5.4585	0.0500	95.5	15.5	557.07	80	25.0
	5.5085	0.0500	127.5	32.0	536.67	87	25.0
EQP1	5.514700	NaN	134.4	NaN	572.83	NaN	NaN
	5.5585	0.0500	183.3	55.8	403.41	91	25.0
	5.6085	0.0500	202.4	19.1	342.94	94	25.0
	5.6695	0.0610	213.2	10.8	303.77	98	25.0
	5.7670	0.0975	223.8	10.6	NaN	100	25.0
	5.8885	0.1215	231.4	7.6	NaN	104	25.0
	6.1065	0.2180	240.5	9.1	NaN	107	25.0
	6.3975	0.2910	248.5	8.0	NaN	110	25.0
	6.8400	0.4425	256.8	8.3	NaN	113	25.0

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

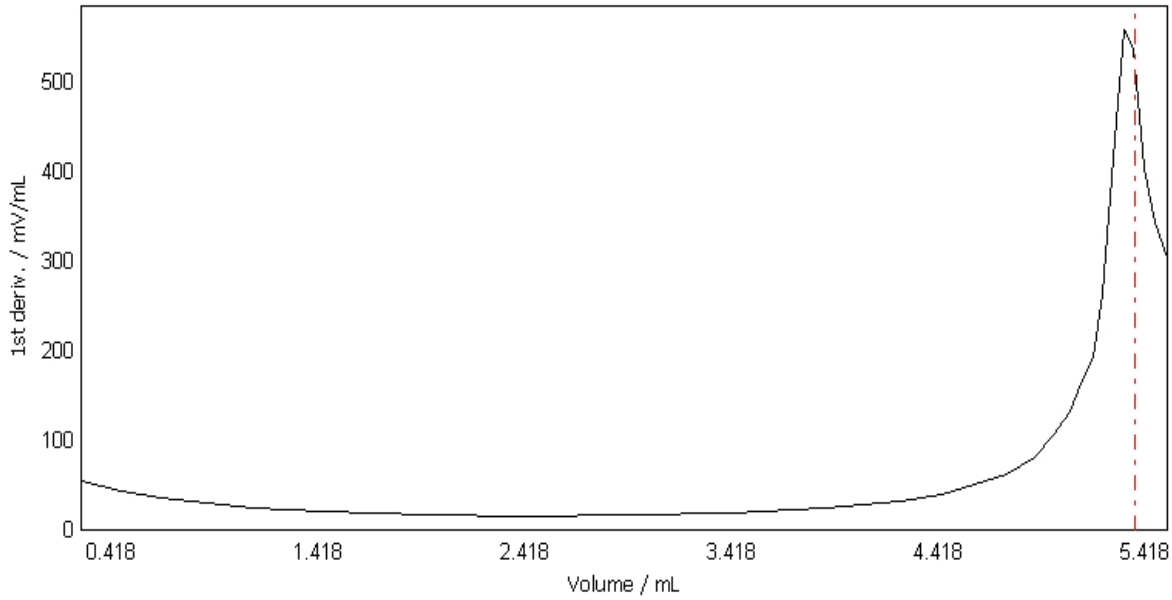


dE/dV - V curve **EQP titration [1]**
Sample 5/6

Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		

dE/dV - V curve EQP titration [1]

Sample 5/6



Raw data

Sample

No.	6/6
Standard	TRIS
Type of standard	solid
Comment	
Titration stand	Rondo60/1A
Weight	m = 0.06784 g
Correction factor	f = 1.0
Purity	p = 100.00 %
Temperature	T = 25.0 oC
Sample start	7/16/2012 12:15:32 PM
Sample end	7/16/2012 12:21:09 PM

EQP titration [1]

Titrant	HCl c = 0.1 mol/L TITER = 1.00247	
Sensor	DG111-SC	
Start potential		EST = -115.7 mV
No. of EQPs and cand.		nEQ = 1
Consumption	EQP1	VEQ1 = 5.567834 mL
		Q1 = 0.558159 mmol
		EEQ1 = 132.3 mV
		EHNV1 = -31.8 mV
Excess		VEX = 1.239166 mL
		QEX = 0.124223 mmol
End		VEND = 6.8070 mL
		QEND = 0.682381 mmol
Termination at	EQPs	
Time	t = 2:07 min	

Calculation

Result	R1 = 1.00580 Titer
Formula	R1=m/(VEQ*c*C)
Constant	M/(10*p*z)
	C = 0.12114

Method: **TiterHCL** **Titer 0.1 mol/LHCl** **7/16/2012 10:22:29 AM**
Start time: **7/16/2012 11:47:20 AM**

Molar mass	M[TRIS] = 121.14 g/mol
Equivalent number	z[TRIS] = 1
Duration	tUSE = 04:42 min

Measured values **EQP titration [1]**

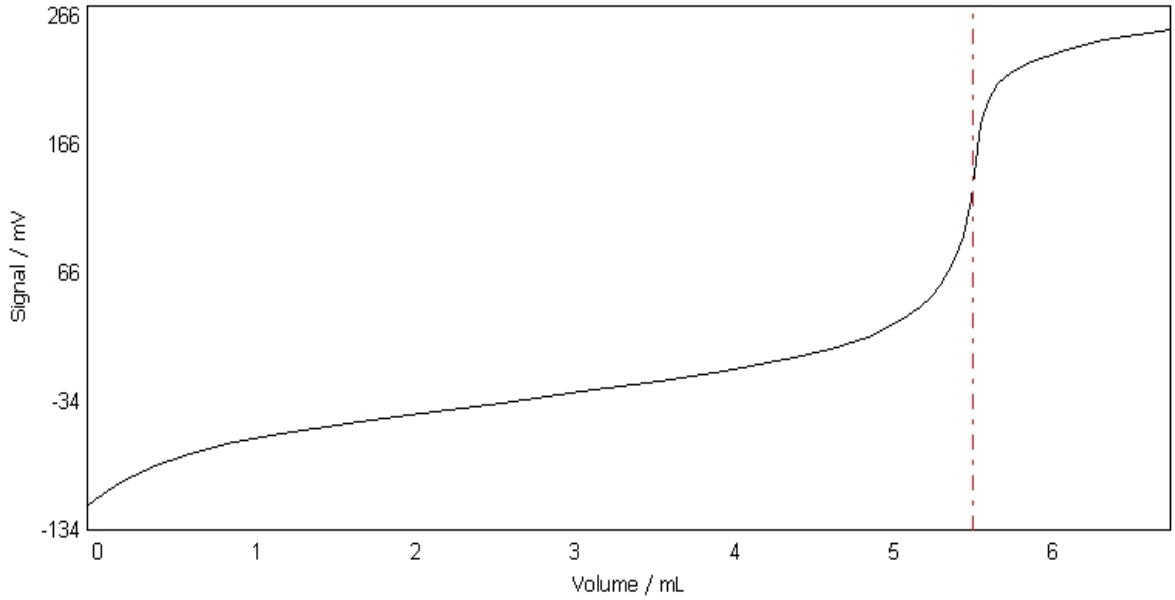
Titrant	HCl c = 0.1 mol/L TITER = 1.00247
Sensor	DG111-SC
Sample	6/6

	Volume mL	Increment mL	Signal mV	Change mV	1st deriv. mV/mL	Time s	Temperature oC
	0.0000	NaN	-115.7	NaN	NaN	0	25.0
	0.0500	0.0500	-110.9	4.8	NaN	3	25.0
	0.1000	0.0500	-105.8	5.1	NaN	6	25.0
	0.1735	0.0735	-99.6	6.2	NaN	9	25.0
	0.2890	0.1155	-91.3	8.3	NaN	13	25.0
	0.4220	0.1330	-84.1	7.2	54.07	16	25.0
	0.6155	0.1935	-76.1	8.0	42.49	19	25.0
	0.8715	0.2560	-67.4	8.7	32.59	22	25.0
	1.1560	0.2845	-60.7	6.7	25.72	25	25.0
	1.6350	0.4790	-51.0	9.7	19.27	28	25.0
	2.1065	0.4715	-42.9	8.1	16.33	31	25.0
	2.6065	0.5000	-34.7	8.2	15.44	34	25.0
	3.1065	0.5000	-26.6	8.1	16.27	37	25.0
	3.5995	0.4930	-17.7	8.9	18.88	40	25.0
	4.0060	0.4065	-10.3	7.4	23.19	43	25.0
	4.4390	0.4330	0.5	10.8	32.55	46	25.0
	4.6705	0.2315	7.3	6.8	41.60	49	25.0
	4.9050	0.2345	16.6	9.3	57.85	52	25.0
	5.0535	0.1485	24.9	8.3	76.84	55	25.0
	5.1550	0.1015	32.6	7.7	99.37	58	25.0
	5.2335	0.0785	40.0	7.4	123.11	61	25.0
	5.3020	0.0685	47.7	7.7	158.61	64	25.0
	5.3605	0.0585	56.7	9.0	197.81	68	25.0
	5.4105	0.0500	66.8	10.1	259.49	72	25.0
	5.4605	0.0500	79.4	12.6	403.85	76	25.0
	5.5105	0.0500	94.6	15.2	542.27	81	25.0
	5.5605	0.0500	123.8	29.2	539.77	84	25.0
EQP1	5.567834	NaN	132.3	NaN	555.36	NaN	NaN
	5.6105	0.0500	181.6	57.8	419.48	90	25.0
	5.6605	0.0500	200.8	19.2	343.67	93	25.0
	5.7230	0.0625	213.0	12.2	301.81	96	25.0
	5.8030	0.0800	221.8	8.8	NaN	99	25.0
	5.9340	0.1310	230.8	9.0	NaN	102	25.0
	6.1180	0.1840	239.1	8.3	NaN	105	25.0
	6.3895	0.2715	247.1	8.0	NaN	108	25.0
	6.8070	0.4175	255.6	8.5	NaN	111	25.0

Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		

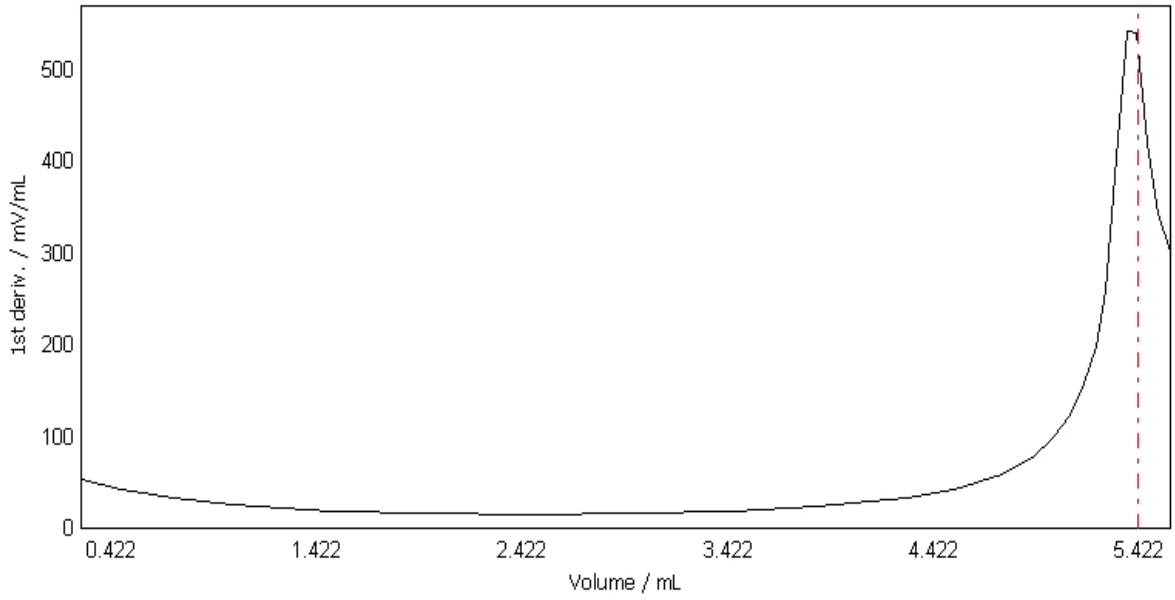
E - V curve EQP titration [1]

Sample 6/6



dE/dV - V curve EQP titration [1]

Sample 6/6



Raw data

Calculation

Result	R2 = 1.0054 -- Mean Titer
Formula	R2=Mean[R1]
Constant	1
	C = 1
Molar mass	M[Potassium hydrogen phthalate] = 204.23 g/mol
Equivalent number	z[Potassium hydrogen phthalate] = 1

Method:	**TiterHCL**	**Titer 0.1 mol/LHCl**	**7/16/2012 10:22:29 AM**
Start time:	**7/16/2012 11:47:20 AM**		

Titer

Titrant	HCl c = 0.1 mol/L
Titer	1.00536

(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: **Development Administrator (admin), 7/16/2012 11:53:00 AM**