

Assay name: pH-metric high logP Analyst: Pion 18C-02010 Instrument ID: Assay ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# pH-metric Result

logP (XH +) -9.50 ±0.85 (n=47) logP (neutral X) 2.90 ±0.02 (n=47)

#### 18C-02010 Points 1 to 22

M09 octanol concentration factor 1.064 Carbonate 0.0587 mM Acidity error -0.83134 mM

#### 18C-02010 Points 23 to 44

M09\_octanol concentration factor 0.800 Carbonate 0.0538 mM -0.43636 mM Acidity error

#### 18C-02010 Points 45 to 64

M09 octanol concentration factor 1.103 Carbonate 0.1700 mM Acidity error -0.97715 mM

# Warnings and errors

Errors None

pН

Warnings One or more logP values out of range

M09\_octanol M09\_octanol M09\_octanol

# Sample logD and percent species

•	· · <b>-</b> · · · · ·	· · · <u>-</u> · · · · · ·	· · <b>-</b> · · · · ·	· · · <u> </u>		
	logD	M09_octanolH	M09_octanol	M09_octanolH*	M09_octanol*	
1.000	-1.47	96.71 %	0.00 %	0.00 %	3.29 %	
1.200	-1.27	94.88 %	0.01 %	0.00 %	5.11 %	Stomach pH
2.000	-0.47	74.60 %	0.03 %	0.00 %	25.37 %	
3.000	0.53	22.70 %	0.10 %	0.00 %	77.20 %	
4.000	1.51	2.85 %	0.12 %	0.00 %	97.03 %	
5.000	2.38	0.29 %	0.12 %	0.00 %	99.58 %	
6.000	2.81	0.03 %	0.13 %	0.00 %	99.85 %	
6.500	2.87	0.01 %	0.13 %	0.00 %	99.87 %	
7.000	2.89	0.00 %	0.13 %	0.00 %	99.87 %	
7.400	2.90	0.00 %	0.13 %	0.00 %	99.87 %	Blood pH
8.000	2.90	0.00 %	0.13 %	0.00 %	99.87 %	
9.000	2.90	0.00 %	0.13 %	0.00 %	99.87 %	
10.000	2.90	0.00 %	0.13 %	0.00 %	99.87 %	
11.000	2.90	0.00 %	0.13 %	0.00 %	99.87 %	
12.000	2.90	0.00 %	0.13 %	0.00 %	99.87 %	

M09\_octanol

M09\_octanol Comment

Reported at: 3/6/2018 11:33:29 AM



Assay ID:

Sample name: M09\_octanol Assay name:

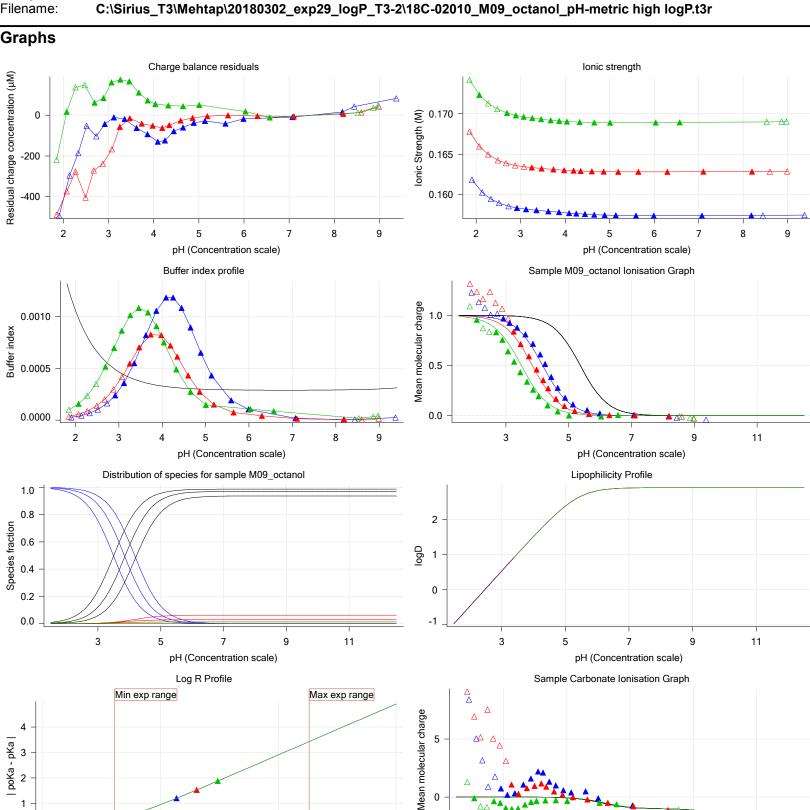
pH-metric high logP

18C-02010

Experiment start time: 3/2/2018 10:00:20 PM

**Pion** Analyst: Instrument ID:

T312060



2

3

pH (Concentration scale)

-2

Log R

0

0

-4

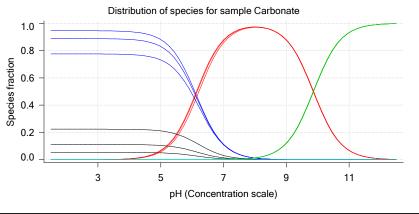
11



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# **Graphs** (continued)





Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# pH-metric high logP Titration 1 of 3 18C-02010 Points 1 to 22

### Overall results

RMSD 0.413
Average ionic strength 0.158 M
Average temperature 24.9°C
Partition ratio 0.0186 : 1

Analyte concentration range 1902.7 µM to 1959.6 µM

Total points considered 15 of 22

## Warnings and errors

Errors None Warnings None

## Four-Plus parameters

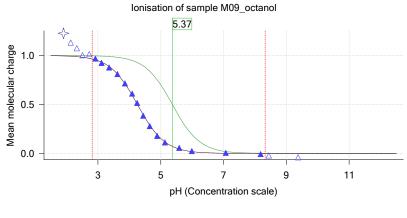
Alpha 0.111 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r S 0.9988 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jH 1.0 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jOH -0.8 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r

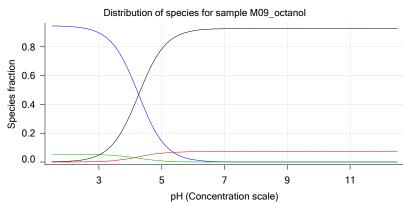
#### Titrants

#### Sample

M09\_octanol concentration factor 1.064
M09\_octanol stoichiometry 1.000
Chloride stoichiometry 1.000
Base pKa 1 5.37
logP (XH +) 0.48
logP (neutral X) 2.84

# Sample graphs







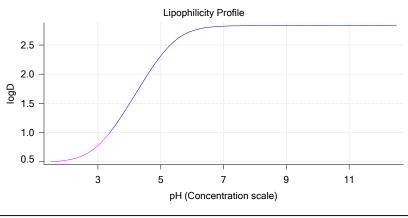
Assay ID:

Sample name: M09\_octanol Experiment start time: 3/2/2018 10:00:20 PM

Assay name: pH-metric high logP Analyst: Pion 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# Sample graphs (continued)



# Sample logD and percent species

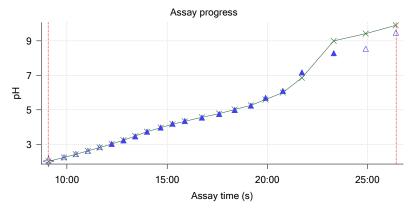
pН	M09_octanol logD	M09_octanol M09_octanolH	M09_octanol M09_octanol	M09_octanol M09_octanolH*	M09_octanol M09_octanol*	Comment
1.000	0.49	94.58 %	0.00 %	5.36 %	0.05 %	
1.200	0.49	94.55 %	0.01 %	5.36 %	0.08 %	Stomach pH
2.000	0.52	94.11 %	0.04 %	5.34 %	0.51 %	
3.000	0.77	89.67 %	0.38 %	5.08 %	4.86 %	
4.000	1.49	60.91 %	2.60 %	3.45 %	33.04 %	
5.000	2.32	14.48 %	6.17 %	0.82 %	78.53 %	
6.000	2.74	1.68 %	7.16 %	0.10 %	91.07 %	
6.500	2.80	0.54 %	7.25 %	0.03 %	92.18 %	
7.000	2.83	0.17 %	7.28 %	0.01 %	92.54 %	
7.400	2.83	0.07 %	7.28 %	0.00 %	92.64 %	Blood pH
8.000	2.83	0.02 %	7.29 %	0.00 %	92.69 %	•
9.000	2.83	0.00 %	7.29 %	0.00 %	92.71 %	
10.000	2.84	0.00 %	7.29 %	0.00 %	92.71 %	
11.000	2.84	0.00 %	7.29 %	0.00 %	92.71 %	
12.000	2.84	0.00 %	7.29 %	0.00 %	92.71 %	

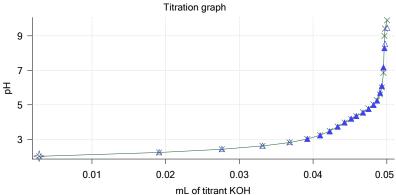
# Carbonate and acidity



Carbonate 0.059 mM Acidity error -0.831 mM

# Other graphs



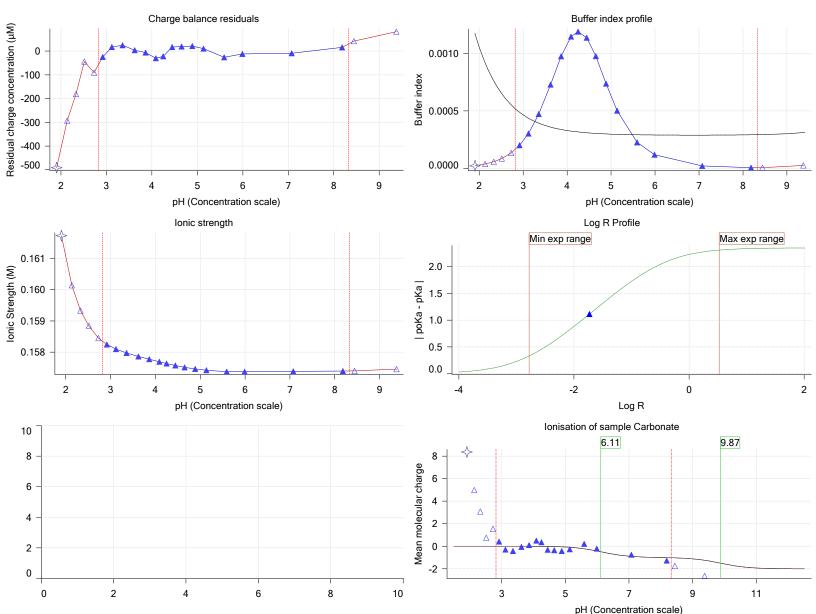




Assay name: pH-metric high logP Analyst: **Pion** 18C-02010 Instrument ID: T312060 Assay ID: Filename:

 $C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric\ high\ logP.t3r$ 

# Other graphs (continued)





Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# pH-metric high logP Titration 2 of 3 18C-02010 Points 23 to 44

#### Overall results

RMSD 0.195
Average ionic strength 0.163 M
Average temperature 25.0°C
Partition ratio 0.0409 : 1

Analyte concentration range 1744.4 µM to 1798.6 µM

Total points considered 13 of 22

## Warnings and errors

Errors None Warnings None

## Four-Plus parameters

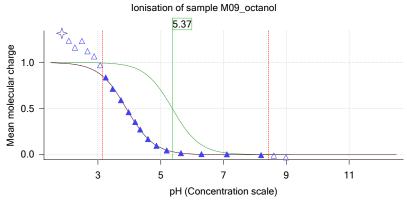
Alpha 0.111 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r S 0.9988 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jH 1.0 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jOH -0.8 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r

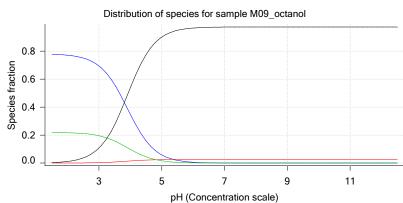
#### Titrants

#### Sample

M09\_octanol concentration factor 0.800
M09\_octanol stoichiometry 1.000
Chloride stoichiometry 1.000
Base pKa 1 5.37
logP (XH +) 0.84
logP (neutral X) 2.95

## Sample graphs







Assay ID:

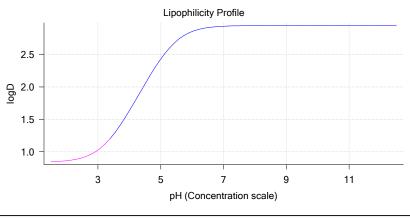
Filename:

Sample name: M09\_octanol Experiment start time: 3/2/2018 10:00:20 PM

Assay name: pH-metric high logP Analyst: Pion Instrument ID: T312060 18C-02010

C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

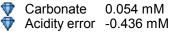
# Sample graphs (continued)



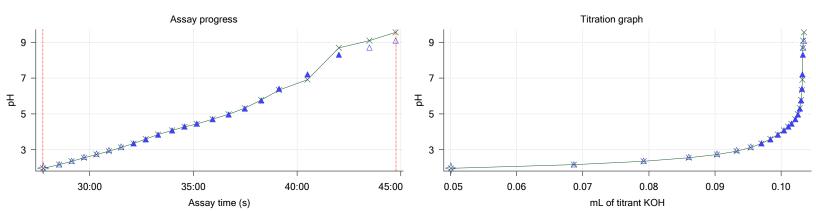
# Sample logD and percent species

рН	M09_octanol	M09_octanol	M09_octanol	M09_octanol	M09_octanol	Comment
	logD	M09_octanolH	M09_octanol	M09_octanolH*	M09_octanol*	
1.000	0.84	77.94 %	0.00 %	21.93 %	0.12 %	
1.200	0.84	77.89 %	0.01 %	21.92 %	0.19 %	Stomach pH
2.000	0.86	77.09 %	0.03 %	21.69 %	1.19 %	
3.000	1.03	69.45 %	0.30 %	19.54 %	10.72 %	
4.000	1.63	34.88 %	1.49 %	9.81 %	53.82 %	
5.000	2.43	5.83 %	2.49 %	1.64 %	90.04 %	
6.000	2.86	0.63 %	2.67 %	0.18 %	96.53 %	
6.500	2.92	0.20 %	2.68 %	0.06 %	97.06 %	
7.000	2.94	0.06 %	2.69 %	0.02 %	97.23 %	
7.400	2.94	0.03 %	2.69 %	0.01 %	97.28 %	Blood pH
8.000	2.95	0.01 %	2.69 %	0.00 %	97.30 %	
9.000	2.95	0.00 %	2.69 %	0.00 %	97.31 %	
10.000	2.95	0.00 %	2.69 %	0.00 %	97.31 %	
11.000	2.95	0.00 %	2.69 %	0.00 %	97.31 %	
12.000	2.95	0.00 %	2.69 %	0.00 %	97.31 %	

# Carbonate and acidity



# Other graphs

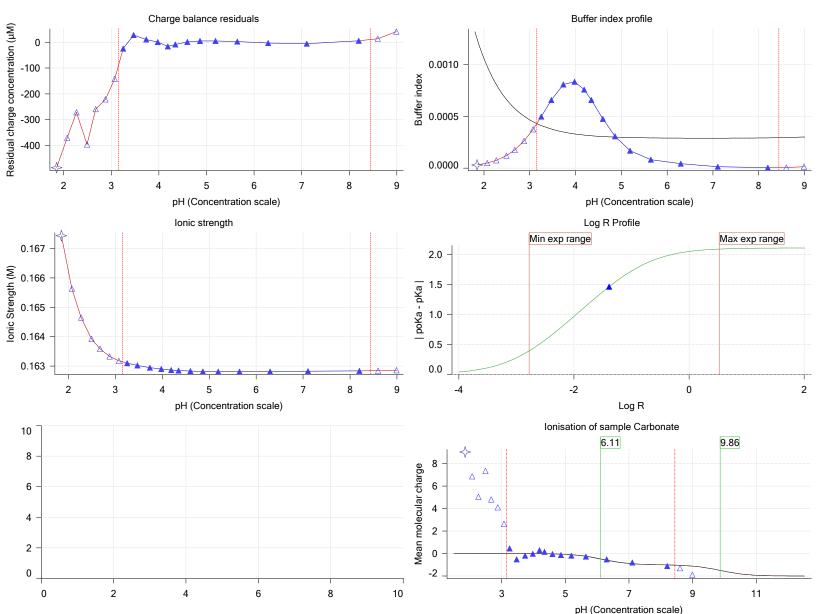




Assay name: pH-metric high logP Analyst: **Pion** Instrument ID: T312060 Assay ID: 18C-02010 Filename:

 $C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric\ high\ logP.t3r$ 

# Other graphs (continued)





Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# pH-metric high logP Titration 3 of 3 18C-02010 Points 45 to 64

#### Overall results

RMSD 0.092
Average ionic strength 0.169 M
Average temperature 25.0°C
Partition ratio 0.0935 : 1

Analyte concentration range 1555.0 µM to 1601.8 µM

Total points considered 14 of 20

## Warnings and errors

Errors None Warnings None

# Four-Plus parameters

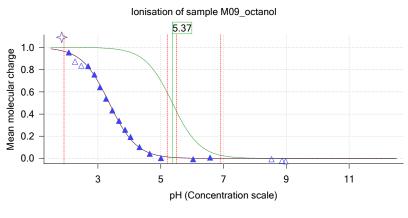
Alpha 0.111 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r S 0.9988 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jH 1.0 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r jOH -0.8 3/2/2018 10:00:20 PM C:\Sirius\_T3\HCl18C02.t3r

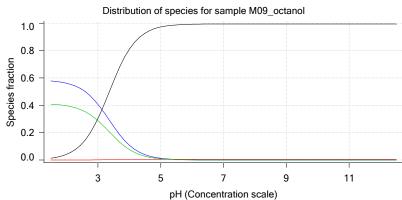
#### Titrants

#### Sample

M09\_octanol concentration factor
 M09\_octanol stoichiometry
 Chloride stoichiometry
 Base pKa 1
 logP (XH +)
 logP (neutral X)
 1.000
 5.37
 0.88
 3.27

### Sample graphs



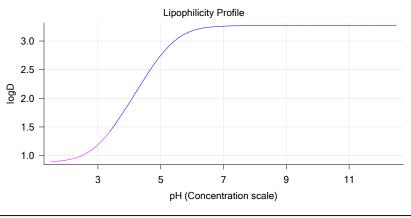




Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

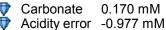
# Sample graphs (continued)



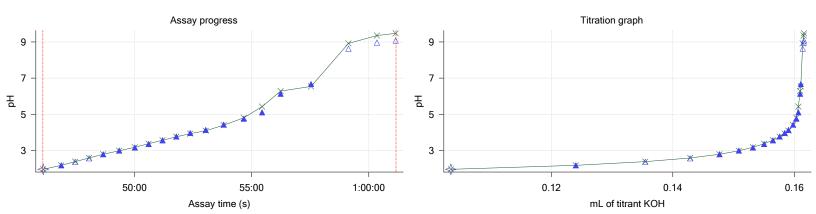
# Sample logD and percent species

рН	M09_octanol	M09_octanol	M09_octanol	M09_octanol	M09_octanol	Comment
	logD	M09_octanolH	MU9_octanoi	M09_octanolH*	M09_octanol*	
1.000	0.88	58.36 %	0.00 %	41.21 %	0.43 %	
1.200	0.89	58.21 %	0.00 %	41.10 %	0.69 %	Stomach pH
2.000	0.92	56.15 %	0.02 %	39.65 %	4.17 %	•
3.000	1.19	40.76 %	0.17 %	28.78 %	30.28 %	
4.000	1.92	10.89 %	0.46 %	7.69 %	80.95 %	
5.000	2.75	1.31 %	0.56 %	0.92 %	97.21 %	
6.000	3.18	0.13 %	0.57 %	0.09 %	99.20 %	
6.500	3.24	0.04 %	0.57 %	0.03 %	99.36 %	
7.000	3.26	0.01 %	0.57 %	0.01 %	99.41 %	
7.400	3.27	0.01 %	0.57 %	0.00 %	99.42 %	Blood pH
8.000	3.27	0.00 %	0.57 %	0.00 %	99.43 %	·
9.000	3.27	0.00 %	0.57 %	0.00 %	99.43 %	
10.000	3.27	0.00 %	0.57 %	0.00 %	99.43 %	
11.000	3.27	0.00 %	0.57 %	0.00 %	99.43 %	
12.000	3.27	0.00 %	0.57 %	0.00 %	99.43 %	

# Carbonate and acidity



# Other graphs

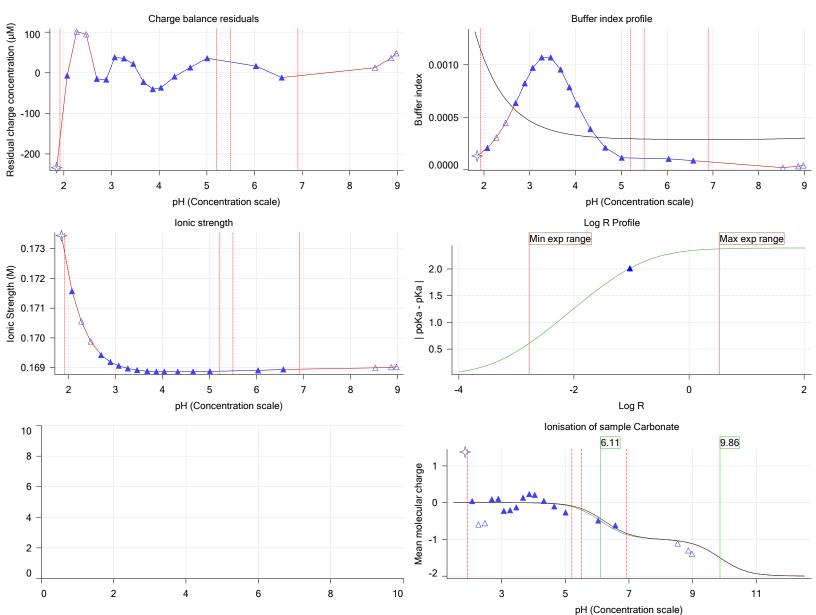




Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# Other graphs (continued)





Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# Assay Model

Settings	Value	Date/Time changed	Imported from
Sample name	M09_octanol	2/27/2018 4:56:17 PM	User entered value
Sample by	Weight		Default value
Sample weight	0.000890 g	3/2/2018 5:08:29 PM	User entered value
Formula weight	287.74 g/mol	2/27/2018 4:45:45 PM	User entered value
Solubility	Unknown		Default value
Molecular weight	251.28	2/27/2018 4:45:45 PM	User entered value
Individual pKa ionic environments	No		Default value
Number of pKas	1	2/27/2018 4:45:45 PM	User entered value
Sample is a	Base	2/27/2018 4:45:45 PM	User entered value
pKa 1	5.37	2/27/2018 4:45:45 PM	User entered value
logp (XH +)	0.76	3/2/2018 3:27:23 PM	User entered value
logP (neutral X)	3.27	3/2/2018 3:27:17 PM	User entered value
Stoichiometry	1.00000		Default value
Aprotic counterion name	Chloride		From standards.xml file
Stoichiometry	1.00		From standards.xml file
Charge per counterion	-1		From standards.xml file

## **Events**

Time	Event	Water	Acid	Base	Octanol	рН	dpH/dt	pH R-squared	pH SD	dpH/dt time
6:00.1	Initial pH = $4.31$									
9:04.7	Data point 1		0.04553 mL					0.33547	0.00097	
9:51.0	Data point 2		0.04553 mL						0.00040	10.0 s
10:26.6	Data point 3		0.04553 mL						0.00028	10.5 s
11:02.7	Data point 4	1.50000 mL	0.04553 mL	0.03314 mL	0.03001 mL	2.623	-0.00261	0.52506	0.00018	10.0 s
11:38.3	Data point 5	1.50000 mL	0.04553 mL	0.03683 mL	0.03001 mL	2.836	-0.00461	0.55068	0.00031	
12:13.7	Data point 6	1.50000 mL	0.04553 mL	0.03923 mL	0.03001 mL	3.025	-0.00570	0.58263	0.00037	10.0 s
12:49.2	Data point 7	1.50000 mL	0.04553 mL	0.04095 mL	0.03001 mL	3.227	-0.00639	0.77318	0.00036	10.0 s
13:24.6	Data point 8		0.04553 mL						0.00025	10.0 s
14:00.0	Data point 9	1.50000 mL	0.04553 mL	0.04334 mL	0.03001 mL	3.728	-0.00671	0.78883	0.00037	10.0 s
14:40.6	Data point 10	1.50000 mL	0.04553 mL	0.04428 mL	0.03001 mL	3.968	-0.01073	0.80668	0.00059	10.0 s
15:16.1	Data point 11		0.04553 mL						0.00096	11.5 s
15:53.0	Data point 12	1.50000 mL	0.04553 mL	0.04586 mL	0.03001 mL	4.354	-0.01589	0.68146	0.00095	10.5 s
16:44.4	Data point 13		0.04553 mL						0.00097	10.5 s
17:35.9	Data point 14	1.50000 mL	0.04553 mL	0.04753 mL	0.03001 mL	4.756	-0.01781	0.86166	0.00095	11.0 s
18:22.6	Data point 15	1.50000 mL	0.04553 mL	0.04821 mL	0.03001 mL	4.992	-0.01766	0.92547	0.00091	12.5 s
19:10.8	Data point 16	1.50000 mL	0.04553 mL	0.04868 mL	0.03001 mL	5.240	-0.01809	0.83242	0.00098	13.5 s
19:54.9	Data point 17	1.50000 mL	0.04553 mL	0.04908 mL	0.03001 mL	5.694	-0.01649	0.87889	0.00087	16.0 s
20:46.7	Data point 18	1.50000 mL	0.04553 mL	0.04934 mL	0.03001 mL	6.092	-0.01930	0.92959	0.00099	21.0 s
21:43.4	Data point 19	1.50000 mL	0.04553 mL	0.04955 mL	0.03001 mL	7.176	-0.04769	0.99644	0.00236	Timed out at
	-									59.5 s
23:19.0	Data point 20	1.50000 mL	0.04553 mL	0.04967 mL	0.03001 mL	8.283	-0.03268	0.96974	0.00164	Timed out at
	-									59.5 s
24:54.6	Data point 21		0.04553 mL						0.00097	54.5 s
	Data point 22		0.04553 mL						0.00094	21.5 s
27:45.4	Data point 23	1.50000 mL	0.09967 mL	0.05005 mL	0.07001 mL	1.973	-0.00556	0.20263	0.00061	10.0 s
28:31.7	Data point 24	1.50000 mL	0.09967 mL	0.06865 mL	0.07001 mL	2.188	-0.00175	0.27969	0.00016	10.5 s
	Data point 25		0.09967 mL				-0.00137	0.05773	0.00028	10.0 s
29:43.5	Data point 26		0.09967 mL					0.18269	0.00021	10.5 s
30:19.5	Data point 27		0.09967 mL					0.84691	0.00052	10.5 s
30:55.5	Data point 28		0.09967 mL						0.00083	
31:31.0	Data point 29	1.50000 mL	0.09967 mL	0.09539 mL	0.07001 mL	3.180	-0.00463		0.00028	10.5 s
32:07.0	Data point 30	1.50000 mL	0.09967 mL	0.09701 mL	0.07001 mL	3.357	-0.00337	0.46236	0.00024	10.0 s
32:42.4	Data point 31	1.50000 mL	0.09967 mL	0.09838 mL	0.07001 mL	3.576	-0.01194	0.46846	0.00086	10.0 s
	Data point 32	1.50000 mL	0.09967 mL	0.09951 mL	0.07001 mL	3.840	-0.01046	0.33603	0.00089	10.0 s
33:58.5	Data point 33	1.50000 mL	0.09967 mL	0.10042 mL	0.07001 mL	4.082	-0.00936	0.85406	0.00050	10.5 s
04044	D 1	4 50000 1	0.00007	0.40400	0.07004	4 00 4	0 00 407	0.00040	0 00000	40.0

1.50000 mL 0.09967 mL 0.10108 mL 0.07001 mL 4.294 -0.00407 0.09219

Reported at: 3/6/2018 11:33:29 AM

34:34.4 Data point 34

0.00066 10.0 s

# **Assay Events**



Sample name: M09\_octanol Experiment start time: 3/2/2018 10:00:20 PM

Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# **Events (continued)**

Time	Event	Water	Acid	Base	Octanol	рН	dpH/dt	pH R-squared	pH SD	dpH/dt
										time
35:09.9	Data point 35			0.10155 mL					0.00081	10.0 s
35:55.6	Data point 36			0.10214 mL				0.84297	0.00076	
36:41.9	Data point 37			0.10254 mL				0.68972	0.00085	
37:28.6	Data point 38			0.10282 mL				0.70413	0.00099	12.0 s
38:16.4	Data point 39			0.10301 mL			-0.01457	0.79249	0.00081	
39:07.6	Data point 40	1.50000 mL		0.10313 mL			-0.01829	0.88102	0.00096	
40:30.3	Data point 41	1.50000 mL	0.09967 mL	0.10320 mL	0.07001 mL	7.207	-0.05114	0.99091	0.00254	Timed out
										at 59.5 s
42:00.8	Data point 42			0.10327 mL					0.00099	58.0 s
43:29.5	Data point 43			0.10332 mL			-0.01983	0.98147	0.00099	35.0 s
44:45.3	Data point 44	1.50000 mL	0.09967 mL	0.10346 mL	0.07001 mL	9.089	-0.01827	0.94147	0.00093	20.5 s
46:06.3	Data point 45	1.50000 mL	0.15753 mL	0.10346 mL	0.17001 mL	1.972	-0.01076	0.86425	0.00057	10.0 s
46:52.6	Data point 46	1.50000 mL	0.15753 mL	0.12404 mL	0.17001 mL	2.189	-0.00758	0.73014	0.00044	10.0 s
47:28.3	Data point 47			0.13547 mL					0.00021	10.0 s
48:03.9	Data point 48	1.50000 mL	0.15753 mL	0.14285 mL	0.17001 mL	2.583	0.00231	0.53001	0.00016	10.5 s
48:39.9	Data point 49	1.50000 mL	0.15753 mL	0.14767 mL	0.17001 mL	2.800	0.01463	0.61912	0.00092	15.5 s
49:20.9	Data point 50	1.50000 mL	0.15753 mL	0.15087 mL	0.17001 mL	2.998	0.01486	0.59518	0.00095	14.5 s
50:00.9	Data point 51	1.50000 mL	0.15753 mL	0.15320 mL	0.17001 mL	3.174	-0.00236	0.06490	0.00046	10.0 s
50:36.4	Data point 52			0.15503 mL			-0.00368	0.52645	0.00025	10.0 s
51:11.8	Data point 53	1.50000 mL	0.15753 mL	0.15647 mL	0.17001 mL	3.564	-0.00334	0.04831	0.00075	10.0 s
51:47.3	Data point 54	1.50000 mL	0.15753 mL	0.15760 mL	0.17001 mL	3.779	-0.00287	0.06293	0.00056	10.0 s
52:22.7	Data point 55	1.50000 mL	0.15753 mL	0.15842 mL	0.17001 mL	3.972	0.01222	0.41308	0.00094	14.5 s
53:02.6	Data point 56	1.50000 mL	0.15753 mL	0.15903 mL	0.17001 mL	4.143	-0.00657	0.60274	0.00042	10.0 s
53:48.4	Data point 57	1.50000 mL	0.15753 mL	0.15981 mL	0.17001 mL	4.429	0.01474	0.60321	0.00094	16.0 s
54:40.1	Data point 58	1.50000 mL	0.15753 mL	0.16033 mL	0.17001 mL	4.755	0.01365	0.52664	0.00093	11.0 s
55:26.8	Data point 59	1.50000 mL	0.15753 mL	0.16065 mL	0.17001 mL	5.112	-0.00952	0.31084	0.00084	11.5 s
56:14.0	Data point 60	1.50000 mL	0.15753 mL	0.16096 mL	0.17001 mL	6.134	-0.01828	0.87737	0.00096	42.5 s
57:32.1	Data point 61	1.50000 mL	0.15753 mL	0.16105 mL	0.17001 mL	6.674	-0.03582	0.95893	0.00181	Timed out at 59.5 s
59:07.8	Data point 62	1.50000 mL	0.15753 mL	0.16138 mL	0.17001 mL	8.628	-0.01937	0.92742	0.00099	
1:00:20.6				0.16152 mL			-0.00684		0.00095	
	Data point 64			0.16159 mL			-0.01927	0.95912	0.00097	
	A a a a v v v a l v v a a a			0.46450 ml						



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

Assay Settings				
Setting	Value	Original Value	Date/Time changed	Imported from
General Settings				
Analyst name	Pion			
Standard Experiment Settings				
Number of titrations	3			
Minimum pH	2.000			
Maximum pH	9.000			
pH step between points of	0.200			
Minimum titrant addition	0.00002 mL			
Maximum titrant addition	0.10000 mL			
Argon flow rate	100%			
Start titration using	Cautious pH adjust			
Advanced General Settings				
Detect turbidity using	None			
Collect turbidity sensor data	No			
Collect UV spectra	No			
Stir after titrant addition for	5 seconds			
For titrant addition, stir at	10%			
Titrant Pre-Dose	1070			
Titrant pre-dose	None			
Assay Medium	TTOTIC			
ISA water volume	1.50 mL			
Water added	Automatic			
Partition solvent type	Octanol			
Partition volume	0.030 mL			
Partition solvent added	Automatic			
	1 seconds			
After partition addition, stir for	i seconus			
Sample Sonication	Voc			
Sonicate	Yes			
Adjust pH for sonication	No			
Sonicate for	120 seconds			
After sonication stir for	5 seconds			
Sample Dissolution	V			
Perform a dissolution stage	Yes			
Adjust and hold pH for dissolution	To start pH			
Stir to dissolve for	120 seconds			
For dissolution, stir at	10%			
Carbonate purge				
Perform a carbonate purge	No			
Temperature Control				
Wait for temperature	Yes			
Required start temperature	25.0°C			
Acceptable deviation	0.5°C			
Time to wait	60 seconds			
Stir speed of	50%			
Titration 1				
Titrate from	Low to high pH			
Adjust to start pH	Yes			
After pH adjust stir for	30 seconds			
Stir to allow partitioning for	15 seconds			
Stirrer speed for partitioning	50%			
Titration 2				
Titrate from	Low to high pH			
Add additional water	0.00 mL			
Additional partition solvent volume				
Additional partition solvent added	Automatic			
After pH adjust stir for	30 seconds			

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30 seconds

15 seconds

55%

After pH adjust stir for

Stir to allow partitioning for

Stirrer speed for partitioning



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# Assay Settings (continued)

Setting	Value	Original Value	Date/Time changed	Imported from	
Titration 3					
Titrate from	Low to high pH				
Add additional water	0.00 mL				
Additional partition solvent volume	0.100 mL				
Additional partition solvent added	Automatic				
After pH adjust stir for	30 seconds				
Stir to allow partitioning for	15 seconds				
Stirrer speed for partitioning	60%				
Data Point Stability					
Stir during data point collection	No				
Delay before data point collection	0 seconds				
Number of points to average	20 points				
Time interval between points	0.50 seconds				
Required maximum standard deviation	0.00100 dpH/dt				
Stability timeout after	60 seconds				

# Calibration Settings

Setting	Value	Date/Time changed	Imported from
Four-Plus alpha	0.111	3/2/2018 10:00:20 PM	C:\Sirius_T3\HCl18C02.t3r
Four-Plus S	0.9988	3/2/2018 10:00:20 PM	C:\Sirius_T3\HCl18C02.t3r
Four-Plus jH	1.0	3/2/2018 10:00:20 PM	C:\Sirius_T3\HCl18C02.t3r
Four-Plus jOH	-0.8	3/2/2018 10:00:20 PM	C:\Sirius_T3\HCl18C02.t3r
Base concentration factor	1.000	3/2/2018 10:00:20 PM	C:\Sirius_T3\KOH18B27.t3r
Acid concentration factor	0.999	3/2/2018 10:00:20 PM	C:\Sirius_T3\HCl18C02.t3r

# **Instrument Settings**

Setting Instrument owner Instrument ID Instrument type Software version	Value Merck T312060 T3 Simulator 1.1.3.0	Batch Id	Install date
Dispenser module Dispenser 0 Syringe volume Firmware version	Water 2.5 mL 1.2.1(r2)	T3DM1200361	3/31/2009 5:24:52 AM 3/31/2009 5:25:05 AM
Titrant Dispenser 2 Syringe volume Firmware version	Water (0.15 M KCI) Acid 0.5 mL 1.2.1(r2)	02-06-2018	2/27/2018 10:05:59 AM 3/31/2009 5:25:11 AM
Titrant Dispenser 1 Syringe volume Firmware version	Acid (0.5 M HCI) Base 0.5 mL 1.2.1(r2)	02-27-2018	2/27/2018 10:27:22 AM 3/31/2009 5:25:21 AM
Titrant Dispenser 5 Syringe volume Firmware version	Base (0.5 M KOH) Cosolvent 2.5 mL 1.2.1(r2)	9/22/2017	2/27/2018 10:21:22 AM 3/31/2009 5:26:24 AM
Distribution valve 5 Firmware version	Distribution Valve		3/31/2009 5:28:19 AM
Port A Port B Dispenser 3 Syringe volume	Methanol (80%, 0.15 M KCI) Cyclohexane Buffer 0.5 mL	09-26-17 11-01-17	2/7/2018 9:42:01 AM 2/27/2018 10:37:57 AM 8/3/2010 5:05:16 AM
Firmware version Titrant Dispenser 6	1.2.1(r2) Dodecane Octanol	2018/01/31	2/28/2018 10:18:04 AM 10/22/2010 10:52:43 AM

Reported at: 3/6/2018 11:33:29 AM



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# Instrument Settings (continued)

Setting Syringe volume	Value 0.5 mL	Batch Id	Install date
Firmware version	1.2.1(r2)		
Titrant	Octanol	01-31-2018	2/27/2018 9:59:35 AM
Titrator		T3TM1200161	3/31/2009 5:24:17 AM
Horizontal axis firmware version	1.17 Al1Dl2DO2 Stepper 2		
Vertical axis firmware version Chassis I/O firmware version	1.17 Al1Dl2DO2 Stepper 2 1.11 Al1Dl0DO4 Norgren I/O		
Probe I/O firmware version	1.1.1 AT DIODO4 Not great 1/0		
Electrode	T3 Electrode	T3E0923	1/23/2018 2:01:00 PM
E0 calibration	+3.23 mV		3/2/2018 10:00:48 PM
Filling solution	3M KCI	KCL097	3/2/2018 9:43:24 AM
Liquids			0/0/00/00 / = / 0 / 5 /
Wash 1	50% IPA:50% Water		3/2/2018 9:45:12 AM
Wash 2 Buffer position 1	0.5% Trition X-100 in H20 pH7 Wash		3/2/2018 9:45:15 AM 3/2/2018 9:45:18 AM
Buffer position 2	pH 7		3/2/2018 9:45:21 AM
Storage position	pri i		3/2/2018 9:44:44 AM
Wash water	7.2e+003 mL	02-27-2018	2/27/2018 9:54:39 AM
Waste	8.2e+003 mL		11/28/2017 10:36:29 AM
Temperature controller			8/5/2010 6:35:13 AM
Turbidity detector		0=1011	3/31/2009 5:24:45 AM
Spectrometer		074811	11/23/2010 11:22:28 AM
Dip probe Wavelength coefficient A0	183.333	10196	
Wavelength coefficient A1	2.21568		
Wavelength coefficient A2	-0.000289308		
Total lamp lit time	120:41:49		11/23/2010 11:22:28 AM
Calibrated on	2/27/2018 10:40:38 AM		
Integration time	40		
Scans averaged	10	T0AL 4000045	44/40/0045 0:24:42 AB4
Autoloader Left-right axis firmware version	1.17 Al1Dl2DO2 Stepper 2	T3AL1200345	11/10/2015 9:34:13 AM
Front-back axis firmware version	1.17 Al1Dl2DO2 Stepper 2		
Vertical axis firmware version	1.17 Al1Dl2DO2 Stepper 2		
Chassis I/O firmware version	1.11 Al1DI0DO4 Norgren I/O		
Configuration			
Alternate titration position	Titration position		
Alternate reference position	Reference position		
Maximum standard vial volume Maximum alternate vial volume	3.50 mL 25.00 mL		
Automatic action idle period	5 minute(s)		
Titrant tube volume	1.3 mL		
Syringe flush count	3.50		
Flowing wash pump volume	20.0 mL		
Flowing wash stir duration	5 s		
Flowing wash stir speed	30%		
Solvent wash stir duration	5 s 30%		
Solvent wash stir speed Surfactant wash stir duration	5 s		
Surfactant wash stir speed	30%		
E0 calibration minimum number of points	10		
E0 calibration maximum standard deviation	0.01500		
E0 calibration timeout period	60 s		
E0 calibration stir duration	5 s		
E0 calibration preparation stir speed	30%		
E0 calibration buffer wash stir duration E0 calibration buffer wash stir speed	5 s 30%		
E0 calibration reading stir speed	0%		

Reported at: 3/6/2018 11:33:29 AM



Experiment start time: 3/2/2018 10:00:20 PM Sample name: M09\_octanol

pH-metric high logP Assay name: Analyst: Pion Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

### Instrument Settings (continued)

Setting	Value	Batch Id	d Install date
Spectrometer calibration stir duration	5 s		
Spectrometer calibration stir speed	30%		
Spectrometer calibration wash pump volume	20.0 mL		
Spectrometer calibration wash stir duration	5 s		
Spectrometer calibration wash stir speed	30%		
Overhead dispense height	10000		
<u> </u>			

### Refinement Settings

Setting	Value	Default value
Turbidity detection method	None	None
Turbidity wavelength to assess	500.0 nm	500.0 nm
Turbidity maximum absorbance	0.100	0.100
Turbidity probe threshold	50.00	50.00

## Experiment Log

- [2:37] Air gap created for Water (0.15 M KCI)
- [2:38] Air gap created for Acid (0.5 M HCI)
- [2:38] Air gap created for Base (0.5 M KOH)
- [2:39] Air gap released for Water (0.15 M KCI)
- [2:42] Titrator arm moved over Titration position
- [2:42] Titration 1 of 3
- [2:42] Adding initial titrants
- [2:42] Automatically add 1.50000 mL of water
- [3:08] Dispensed 1.500000 mL of Water (0.15 M KCI)
- [3:12] Titrator arm moved over Drain
- [5:53] Titrator arm moved to Titration position
- [5:53] Argon flow rate set to 100
- [5:53] Stirrer speed set to 10
- [5:58] Automatically add 0.03000 mL of Octanol
- [5:59] Dispensed 0.030009 mL of Octanol
- [6:00] Initial pH = 4.31
- [6:00] Iterative adjust 4.31 -> 2.00
- [6:00] pH 4.31 -> 2.00
- [6:02] Air gap released for Acid (0.5 M HCl)
- [6:03] Dispensed 0.043815 mL of Acid (0.5 M HCI)
- [6:08] pH 2.02 -> 2.00
- [6:08] Dispensed 0.001717 mL of Acid (0.5 M HCI)
- [6:13] Holding pH 2.00
- [8:13] Stirrer speed set to 0
- [8:13] Stirrer speed set to 50
- [8:13] Iterative adjust 1.97 -> 2.00
- [8:13] pH 1.97 -> 2.00
- [8:14] Air gap released for Base (0.5 M KOH)
- [8:15] Dispensed 0.002846 mL of Base (0.5 M KOH)
- [9:05] Stirrer speed set to 0
- [9:15] Datapoint id 1 collected [9:15] Stirrer speed set to 50
- [9:20] pH 2.03 -> 2.23
- [9:20] Using cautious pH adjust [9:20] Dispensed 0.007173 mL of Base (0.5 M KOH)
- [9:25] Stepping pH = 2.10 [9:26] Dispensed 0.007832 mL of Base (0.5 M KOH)
- [9:31] Stepping pH = 2.21 [9:31] Dispensed 0.001270 mL of Base (0.5 M KOH)
- [9:36] Stepping pH = 2.24
- [9:51] Stirrer speed set to 0 [10:01] Datapoint id 2 collected
- Reported at: 3/6/2018 11:33:29 AM



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

- [10:01] Charge balance equation is out by -13.4%
- [10:01] Stirrer speed set to 50
- [10:06] pH 2.26 -> 2.46
- [10:06] Using charge balance adjust
- [10:07] Dispensed 0.008514 mL of Base (0.5 M KOH)
- [10:27] Stirrer speed set to 0
- [10:37] Datapoint id 3 collected
- [10:37] Charge balance equation is out by -7.5%
- [10:37] Stirrer speed set to 50
- [10:42] pH 2.45 -> 2.65
- [10:42] Using charge balance adjust
- [10:43] Dispensed 0.005503 mL of Base (0.5 M KOH)
- [11:03] Stirrer speed set to 0
- [11:13] Datapoint id 4 collected
- [11:13] Charge balance equation is out by -12.9%
- [11:13] Stirrer speed set to 50
- [11:18] pH 2.63 -> 2.83
- [11:18] Using charge balance adjust
- [11:18] Dispensed 0.003692 mL of Base (0.5 M KOH)
- [11:38] Stirrer speed set to 0
- [11:48] Datapoint id 5 collected
- [11:48] Charge balance equation is out by 3.3%
- [11:48] Stirrer speed set to 50
- [11:54] pH 2.84 -> 3.04
- [11:54] Using charge balance adjust
- [11:54] Dispensed 0.002399 mL of Base (0.5 M KOH)
- [12:14] Stirrer speed set to 0
- [12:24] Datapoint id 6 collected
- [12:24] Charge balance equation is out by -8.2%
- [12:24] Stirrer speed set to 50
- [12:29] pH 3.03 -> 3.23
- [12:29] Using charge balance adjust
- [12:29] Dispensed 0.001717 mL of Base (0.5 M KOH)
- [12:49] Stirrer speed set to 0
- [12:59] Datapoint id 7 collected
- [12:59] Charge balance equation is out by -2.1%
- [12:59] Stirrer speed set to 50
- [13:04] pH 3.23 -> 3.43
- [13:04] Using charge balance adjust
- [13:05] Dispensed 0.001317 mL of Base (0.5 M KOH)
- [13:25] Stirrer speed set to 0
- [13:35] Datapoint id 8 collected
- [13:35] Charge balance equation is out by 15.0%
- [13:35] Stirrer speed set to 50
- [13:40] pH 3.47 -> 3.67
- [13:40] Using charge balance adjust
- [13:40] Dispensed 0.001082 mL of Base (0.5 M KOH)
- [14:00] Stirrer speed set to 0
- [14:10] Datapoint id 9 collected
- [14:10] Charge balance equation is out by 31.3%
- [14:10] Stirrer speed set to 50
- [14:15] pH 3.73 -> 3.93
- [14:15] Using cautious pH adjust
- [14:15] Dispensed 0.000494 mL of Base (0.5 M KOH)
- [14:21] Stepping pH = 3.81
- [14:21] Dispensed 0.000447 mL of Base (0.5 M KOH)
- [14:26] Stepping pH = 3.94
- [14:41] Stirrer speed set to 0
- [14:51] Datapoint id 10 collected



Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

- [14:51] Charge balance equation is out by 3.1%
- [14:51] Stirrer speed set to 50
- [14:56] pH 3.97 -> 4.17
- [14:56] Using charge balance adjust
- [14:56] Dispensed 0.000870 mL of Base (0.5 M KOH)
- [15:16] Stirrer speed set to 0
- [15:28] Datapoint id 11 collected
- [15:28] Charge balance equation is out by 10.9%
- [15:28] Stirrer speed set to 50
- [15:33] pH 4.20 -> 4.40
- [15:33] Using charge balance adjust
- [15:33] Dispensed 0.000706 mL of Base (0.5 M KOH)
- [15:53] Stirrer speed set to 0
- [16:04] Datapoint id 12 collected
- [16:04] Charge balance equation is out by -22.6%
- [16:04] Stirrer speed set to 50
- [16:09] pH 4.36 -> 4.56
- [16:09] Using cautious pH adjust
- [16:09] Dispensed 0.000306 mL of Base (0.5 M KOH)
- [16:14] Stepping pH = 4.41
- [16:14] Dispensed 0.000447 mL of Base (0.5 M KOH)
- [16:19] Stepping pH = 4.52
- [16:19] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [16:24] Stepping pH = 4.55
- [16:24] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [16:29] Stepping pH = 4.56
- [16:45] Stirrer speed set to 0
- [16:55] Datapoint id 13 collected
- [16:55] Charge balance equation is out by -53.1%
- [16:55] Stirrer speed set to 50
- [17:00] pH 4.56 -> 4.76
- [17:00] Using cautious pH adjust
- [17:00] Dispensed 0.000235 mL of Base (0.5 M KOH)
- [17:06] Stepping pH = 4.60
- [17:06] Dispensed 0.000329 mL of Base (0.5 M KOH)
- [17:11] Stepping pH = 4.70
- [17:11] Dispensed 0.000165 mL of Base (0.5 M KOH)
- [17:16] Stepping pH = 4.75
- [17:16] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [17:21] Stepping pH = 4.76
- [17:36] Stirrer speed set to 0
- [17:47] Datapoint id 14 collected
- [17:47] Charge balance equation is out by -67.5%
- [17:47] Stirrer speed set to 50
- [17:52] pH 4.77 -> 4.97
- [17:52] Using cautious pH adjust
- [17:52] Dispensed 0.000165 mL of Base (0.5 M KOH)
- [17:57] Stepping pH = 4.79
- [17:57] Dispensed 0.000400 mL of Base (0.5 M KOH)
- [18:03] Stepping pH = 4.92
- [18:03] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [18:08] Stepping pH = 4.98
- [18:23] Stirrer speed set to 0
- [18:35] Datapoint id 15 collected
- [18:35] Charge balance equation is out by -106.8%
- [18:35] Stirrer speed set to 50
- [18:40] pH 5.01 -> 5.21
- [18:40] Using cautious pH adjust
- [18:41] Dispensed 0.000094 mL of Base (0.5 M KOH)



pH-metric high logP **Pion** Assay name: Analyst: Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

- [18:46] Stepping pH = 5.01
- [18:46] Dispensed 0.000306 mL of Base (0.5 M KOH)
- [18:51] Stepping pH = 5.16
- [18:51] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [18:56] Stepping pH = 5.22
- [19:11] Stirrer speed set to 0
- [19:25] Datapoint id 16 collected
- [19:25] Charge balance equation is out by -128.8%
- [19:25] Stirrer speed set to 50
- [19:30] pH 5.26 -> 5.46
- [19:30] Using cautious pH adjust
- [19:30] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [19:35] Stepping pH = 5.26
- [19:35] Dispensed 0.000329 mL of Base (0.5 M KOH)
- [19:40] Stepping pH = 5.52
- [19:55] Stirrer speed set to 0
- [20:11] Datapoint id 17 collected
- [20:11] Charge balance equation is out by -200.5%
- [20:11] Stirrer speed set to 50
- [20:16] pH 5.72 -> 5.92
- [20:16] Using cautious pH adjust
- [20:16] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [20:21] Stepping pH = 5.73
- [20:22] Dispensed 0.000094 mL of Base (0.5 M KOH)
- [20:27] Stepping pH = 5.79
- [20:27] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [20:32] Stepping pH = 5.94
- [20:47] Stirrer speed set to 0
- [21:08] Datapoint id 18 collected
- [21:08] Charge balance equation is out by -265.1%
- [21:08] Stirrer speed set to 50
- [21:13] pH 6.11 -> 6.31
- [21:13] Using cautious pH adjust
- [21:13] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [21:18] Stepping pH = 6.11
- [21:18] Dispensed 0.000141 mL of Base (0.5 M KOH)
- [21:23] Stepping pH = 6.26
- [21:23] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [21:29] Stepping pH = 6.65
- [21:44] Stirrer speed set to 0 [22:44] Datapoint id 19 collected
- [22:44] Charge balance equation is out by -268.6%
- [22:44] Stirrer speed set to 50
- [22:49] pH 7.06 -> 7.26
- [22:49] Using cautious pH adjust
- [22:49] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [22:54] Stepping pH = 7.04
- [22:54] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [22:59] Stepping pH = 7.13
- [22:59] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [23:04] Stepping pH = 7.50
- [23:19] Stirrer speed set to 0
- [24:19] Datapoint id 20 collected
- [24:19] Charge balance equation is out by -526.7%
- [24:19] Stirrer speed set to 50
- [24:24] pH 8.19 -> 8.39
- [24:24] Using cautious pH adjust
- [24:24] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [24:29] Stepping pH = 8.16



pH-metric high logP Assay name: Analyst: Pion Assay ID: 18C-02010 Instrument ID: T312060

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- [24:29] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [24:35] Stepping pH = 8.20
- [24:35] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [24:40] Stepping pH = 8.49
- [24:55] Stirrer speed set to 0
- [25:49] Datapoint id 21 collected
- [25:49] Charge balance equation is out by -997.9%
- [25:49] Stirrer speed set to 50
- [25:55] pH 8.47 -> 8.67
- [25:55] Using cautious pH adjust
- [25:55] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [26:00] Stepping pH = 8.43
- [26:00] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [26:05] Stepping pH = 8.40
- [26:05] Dispensed 0.000212 mL of Base (0.5 M KOH)
- [26:10] Stepping pH = 9.23
- [26:25] Stirrer speed set to 0
- [26:47] Datapoint id 22 collected
- [26:47] Charge balance equation is out by -1,935.7%
- [26:47] Titration 2 of 3
- [26:47] Adding initial titrants
- [26:47] Automatically add 0.04000 mL of Octanol
- [26:48] Dispensed 0.040005 mL of Octanol
- [26:48] Stirrer speed set to 10
- [26:49] Stirrer speed set to 55
- [26:49] Iterative adjust 9.48 -> 2.00
- [26:49] pH 9.48 -> 2.00
- [26:50] Dispensed 0.048871 mL of Acid (0.5 M HCl)
- [26:55] pH 2.05 -> 2.00
- [26:55] Dispensed 0.005268 mL of Acid (0.5 M HCI)
- [27:46] Stirrer speed set to 0
- [27:56] Datapoint id 23 collected
- [27:56] Stirrer speed set to 55
- [28:01] pH 1.98 -> 2.18
- [28:01] Using cautious pH adjust
- [28:01] Dispensed 0.008702 mL of Base (0.5 M KOH)
- [28:06] Stepping pH = 2.05
- [28:06] Dispensed 0.008302 mL of Base (0.5 M KOH)
- [28:12] Stepping pH = 2.15
- [28:12] Dispensed 0.001599 mL of Base (0.5 M KOH)
- [28:17] Stepping pH = 2.18
- [28:32] Stirrer speed set to 0
- [28:42] Datapoint id 24 collected
- [28:42] Charge balance equation is out by -6.9%
- [28:42] Stirrer speed set to 55
- [28:47] pH 2.19 -> 2.39
- [28:47] Using charge balance adjust
- [28:48] Dispensed 0.010560 mL of Base (0.5 M KOH)
- [29:08] Stirrer speed set to 0
- [29:18] Datapoint id 25 collected
- [29:18] Charge balance equation is out by -5.9%
- [29:18] Stirrer speed set to 55
- [29:23] pH 2.39 -> 2.59
- [29:23] Using charge balance adjust
- [29:23] Dispensed 0.006820 mL of Base (0.5 M KOH)
- [29:44] Stirrer speed set to 0
- [29:54] Datapoint id 26 collected
- [29:54] Charge balance equation is out by 6.5%
- [29:54] Stirrer speed set to 55



pH-metric high logP **Pion** Assay name: Analyst: Assay ID: 18C-02010 Instrument ID: T312060

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- [29:59] pH 2.61 -> 2.81
- [29:59] Using charge balance adjust
- [30:00] Dispensed 0.004257 mL of Base (0.5 M KOH)
- [30:20] Stirrer speed set to 0
- [30:30] Datapoint id 27 collected
- [30:30] Charge balance equation is out by -12.7%
- [30:30] Stirrer speed set to 55
- [30:35] pH 2.78 -> 2.98
- [30:35] Using charge balance adjust
- [30:36] Dispensed 0.002987 mL of Base (0.5 M KOH)
- [30:56] Stirrer speed set to 0
- [31:06] Datapoint id 28 collected
- [31:06] Charge balance equation is out by 0.0%
- [31:06] Stirrer speed set to 55
- [31:11] pH 2.99 -> 3.19
- [31:11] Using charge balance adjust
- [31:11] Dispensed 0.002117 mL of Base (0.5 M KOH)
- [31:31] Stirrer speed set to 0
- [31:42] Datapoint id 29 collected
- [31:42] Charge balance equation is out by -3.1%
- [31:42] Stirrer speed set to 55
- [31:47] pH 3.18 -> 3.38
- [31:47] Using charge balance adjust
- [31:47] Dispensed 0.001623 mL of Base (0.5 M KOH)
- [32:07] Stirrer speed set to 0
- [32:17] Datapoint id 30 collected
- [32:17] Charge balance equation is out by -13.1%
- [32:17] Stirrer speed set to 55
- [32:22] pH 3.36 -> 3.56
- [32:22] Using charge balance adjust
- [32:22] Dispensed 0.001364 mL of Base (0.5 M KOH)
- [32:43] Stirrer speed set to 0
- [32:53] Datapoint id 31 collected
- [32:53] Charge balance equation is out by 7.5%
- [32:53] Stirrer speed set to 55
- [32:58] pH 3.58 -> 3.78
- [32:58] Using charge balance adjust
- [32:58] Dispensed 0.001129 mL of Base (0.5 M KOH)
- [33:18] Stirrer speed set to 0
- [33:28] Datapoint id 32 collected
- [33:28] Charge balance equation is out by 30.1%
- [33:28] Stirrer speed set to 55
- [33:33] pH 3.84 -> 4.04
- [33:33] Using cautious pH adjust
- [33:33] Dispensed 0.000447 mL of Base (0.5 M KOH)
- [33:38] Stepping pH = 3.91
- [33:38] Dispensed 0.000470 mL of Base (0.5 M KOH)
- [33:44] Stepping pH = 4.03
- [33:59] Stirrer speed set to 0
- [34:09] Datapoint id 33 collected
- [34:09] Charge balance equation is out by -3.9%
- [34:09] Stirrer speed set to 55
- [34:14] pH 4.08 -> 4.28
- [34:14] Using charge balance adjust
- [34:14] Dispensed 0.000659 mL of Base (0.5 M KOH)
- [34:35] Stirrer speed set to 0
- [34:45] Datapoint id 34 collected
- [34:45] Charge balance equation is out by 5.3%
- [34:45] Stirrer speed set to 55



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- [34:50] pH 4.30 -> 4.50
- [34:50] Using charge balance adjust
- [34:50] Dispensed 0.000470 mL of Base (0.5 M KOH)
- [35:10] Stirrer speed set to 0
- [35:20] Datapoint id 35 collected
- [35:20] Charge balance equation is out by -24.5%
- [35:20] Stirrer speed set to 55
- [35:25] pH 4.46 -> 4.66
- [35:25] Using cautious pH adjust
- [35:25] Dispensed 0.000188 mL of Base (0.5 M KOH)
- [35:30] Stepping pH = 4.50
- [35:30] Dispensed 0.000306 mL of Base (0.5 M KOH)
- [35:36] Stepping pH = 4.61
- [35:36] Dispensed 0.000094 mL of Base (0.5 M KOH)
- [35:41] Stepping pH = 4.67
- [35:56] Stirrer speed set to 0
- [36:06] Datapoint id 36 collected
- [36:06] Charge balance equation is out by -61.6%
- [36:06] Stirrer speed set to 55
- [36:11] pH 4.71 -> 4.91
- [36:11] Using cautious pH adjust
- [36:12] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [36:17] Stepping pH = 4.74
- [36:17] Dispensed 0.000235 mL of Base (0.5 M KOH)
- [36:22] Stepping pH = 4.88
- [36:22] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [36:27] Stepping pH = 4.93
- [36:42] Stirrer speed set to 0
- [36:53] Datapoint id 37 collected
- [36:53] Charge balance equation is out by -76.9%
- [36:53] Stirrer speed set to 55
- [36:58] pH 4.98 -> 5.18
- [36:58] Using cautious pH adjust
- [36:58] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [37:03] Stepping pH = 5.00
- [37:03] Dispensed 0.000188 mL of Base (0.5 M KOH)
- [37:09] Stepping pH = 5.17
- [37:09] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [37:14] Stepping pH = 5.23
- [37:29] Stirrer speed set to 0
- [37:41] Datapoint id 38 collected
- [37:41] Charge balance equation is out by -100.4%
- [37:41] Stirrer speed set to 55
- [37:46] pH 5.31 -> 5.51
- [37:46] Using cautious pH adjust
- [37:46] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [37:51] Stepping pH = 5.32
- [37:51] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [37:56] Stepping pH = 5.49
- [37:56] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [38:01] Stepping pH = 5.62
- [38:17] Stirrer speed set to 0
- [38:32] Datapoint id 39 collected
- [38:32] Charge balance equation is out by -114.7%
- [38:32] Stirrer speed set to 55
- [38:37] pH 5.77 -> 5.97
- [38:37] Using cautious pH adjust
- [38:37] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [38:42] Stepping pH = 5.78



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- [38:42] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [38:48] Stepping pH = 5.95
- [38:48] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [38:53] Stepping pH = 6.16
- [39:08] Stirrer speed set to 0
- [39:55] Datapoint id 40 collected
- [39:55] Charge balance equation is out by -131.1%
- [39:55] Stirrer speed set to 55
- [40:00] pH 6.40 -> 6.60
- [40:00] Using cautious pH adjust
- [40:00] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [40:05] Stepping pH = 6.45
- [40:05] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [40:10] Stepping pH = 6.54
- [40:10] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [40:15] Stepping pH = 6.77
- [40:31] Stirrer speed set to 0
- [41:31] Datapoint id 41 collected
- [41:31] Charge balance equation is out by -75.8%
- [41:31] Stirrer speed set to 55
- [41:36] pH 7.09 -> 7.29
- [41:36] Using cautious pH adjust
- [41:36] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [41:41] Stepping pH = 7.03
- [41:41] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [41:46] Stepping pH = 7.49
- [42:01] Stirrer speed set to 0
- [42:59] Datapoint id 42 collected
- [42:59] Charge balance equation is out by -364.7%
- [42:59] Stirrer speed set to 55
- [43:04] pH 8.28 -> 8.48
- [43:04] Using cautious pH adjust
- [43:04] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [43:09] Stepping pH = 8.37
- [43:09] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [43:15] Stepping pH = 8.52
- [43:30] Stirrer speed set to 0
- [44:05] Datapoint id 43 collected
- [44:05] Charge balance equation is out by -286.1%
- [44:05] Stirrer speed set to 55
- [44:10] pH 8.68 -> 8.88
- [44:10] Using cautious pH adjust
- [44:10] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [44:15] Stepping pH = 8.68
- [44:15] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [44:20] Stepping pH = 8.76
- [44:20] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [44:25] Stepping pH = 8.85
- [44:25] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [44:30] Stepping pH = 8.98
- [44:46] Stirrer speed set to 0
- [45:06] Datapoint id 44 collected
- [45:06] Charge balance equation is out by -572.8%
- [45:06] Titration 3 of 3
- [45:06] Adding initial titrants
- [45:06] Automatically add 0.10000 mL of Octanol
- [45:08] Dispensed 0.100000 mL of Octanol
- [45:08] Stirrer speed set to 10
- [45:10] Stirrer speed set to 60



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- [45:10] Iterative adjust 9.09 -> 2.00
- [45:10] pH 9.09 -> 2.00
- [45:11] Dispensed 0.051529 mL of Acid (0.5 M HCI)
- [45:16] pH 2.06 -> 2.00
- [45:16] Dispensed 0.006326 mL of Acid (0.5 M HCI)
- [46:07] Stirrer speed set to 0
- [46:17] Datapoint id 45 collected
- [46:17] Stirrer speed set to 60
- [46:22] pH 1.97 -> 2.17
- [46:22] Using cautious pH adjust
- [46:22] Dispensed 0.009431 mL of Base (0.5 M KOH)
- [46:27] Stepping pH = 2.04
- [46:27] Dispensed 0.009525 mL of Base (0.5 M KOH)
- [46:32] Stepping pH = 2.15
- [46:33] Dispensed 0.001623 mL of Base (0.5 M KOH)
- [46:38] Stepping pH = 2.18
- [46:53] Stirrer speed set to 0
- [47:03] Datapoint id 46 collected
- [47:03] Charge balance equation is out by -9.2%
- [47:03] Stirrer speed set to 60
- [47:08] pH 2.19 -> 2.39
- [47:08] Using charge balance adjust
- [47:08] Dispensed 0.011430 mL of Base (0.5 M KOH)
- [47:28] Stirrer speed set to 0
- [47:38] Datapoint id 47 collected
- [47:38] Charge balance equation is out by -4.3%
- [47:38] Stirrer speed set to 60
- [47:44] pH 2.39 -> 2.59
- [47:44] Using charge balance adjust
- [47:44] Dispensed 0.007385 mL of Base (0.5 M KOH)
- [48:04] Stirrer speed set to 0
- [48:15] Datapoint id 48 collected
- [48:15] Charge balance equation is out by -1.9%
- [48:15] Stirrer speed set to 60
- [48:20] pH 2.59 -> 2.79
- [48:20] Using charge balance adjust
- [48:20] Dispensed 0.004821 mL of Base (0.5 M KOH)
- [48:40] Stirrer speed set to 0
- [48:56] Datapoint id 49 collected
- [48:56] Charge balance equation is out by 5.6%
- [48:56] Stirrer speed set to 60
- [49:01] pH 2.81 -> 3.01
- [49:01] Using charge balance adjust
- [49:01] Dispensed 0.003198 mL of Base (0.5 M KOH)
- [49:21] Stirrer speed set to 0
- [49:36] Datapoint id 50 collected
- [49:36] Charge balance equation is out by -4.8%
- [49:36] Stirrer speed set to 60
- [49:41] pH 3.00 -> 3.20
- [49:41] Using charge balance adjust
- [49:41] Dispensed 0.002328 mL of Base (0.5 M KOH)
- [50:01] Stirrer speed set to 0
- [50:11] Datapoint id 51 collected
- [50:11] Charge balance equation is out by -14.6%
- [50:11] Stirrer speed set to 60
- [50:16] pH 3.18 -> 3.38
- [50:16] Using charge balance adjust
- [50:16] Dispensed 0.001834 mL of Base (0.5 M KOH)
- [50:37] Stirrer speed set to 0



pH-metric high logP **Pion** Assay name: Analyst: Assay ID: 18C-02010 Instrument ID: T312060

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- [50:47] Datapoint id 52 collected
- [50:47] Charge balance equation is out by -5.0%
- [50:47] Stirrer speed set to 60
- [50:52] pH 3.37 -> 3.57
- [50:52] Using charge balance adjust
- [50:52] Dispensed 0.001435 mL of Base (0.5 M KOH)
- [51:12] Stirrer speed set to 0
- [51:22] Datapoint id 53 collected
- [51:22] Charge balance equation is out by -4.5%
- [51:22] Stirrer speed set to 60
- [51:27] pH 3.57 -> 3.77
- [51:27] Using charge balance adjust
- [51:27] Dispensed 0.001129 mL of Base (0.5 M KOH)
- [51:47] Stirrer speed set to 0
- [51:57] Datapoint id 54 collected
- [51:57] Charge balance equation is out by 5.2%
- [51:57] Stirrer speed set to 60
- [52:03] pH 3.78 -> 3.98
- [52:03] Using charge balance adjust
- [52:03] Dispensed 0.000823 mL of Base (0.5 M KOH)
- [52:23] Stirrer speed set to 0
- [52:37] Datapoint id 55 collected
- [52:37] Charge balance equation is out by -5.8%
- [52:37] Stirrer speed set to 60
- [52:43] pH 3.98 -> 4.18
- [52:43] Using charge balance adjust
- [52:43] Dispensed 0.000611 mL of Base (0.5 M KOH)
- [53:03] Stirrer speed set to 0
- [53:13] Datapoint id 56 collected
- [53:13] Charge balance equation is out by -17.3%
- [53:13] Stirrer speed set to 60
- [53:18] pH 4.15 -> 4.35
- [53:18] Using cautious pH adjust
- [53:18] Dispensed 0.000235 mL of Base (0.5 M KOH)
- [53:23] Stepping pH = 4.19
- [53:23] Dispensed 0.000400 mL of Base (0.5 M KOH)
- [53:28] Stepping pH = 4.30
- [53:28] Dispensed 0.000141 mL of Base (0.5 M KOH)
- [53:33] Stepping pH = 4.38
- [53:49] Stirrer speed set to 0
- [54:05] Datapoint id 57 collected
- [54:05] Charge balance equation is out by -71.6%
- [54:05] Stirrer speed set to 60
- [54:10] pH 4.43 -> 4.63
- [54:10] Using cautious pH adjust
- [54:10] Dispensed 0.000118 mL of Base (0.5 M KOH)
- [54:15] Stepping pH = 4.44
- [54:15] Dispensed 0.000353 mL of Base (0.5 M KOH)
- [54:20] Stepping pH = 4.61
- [54:20] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [54:25] Stepping pH = 4.70
- [54:40] Stirrer speed set to 0
- [54:51] Datapoint id 58 collected
- [54:51] Charge balance equation is out by -107.6%
- [54:51] Stirrer speed set to 60
- [54:56] pH 4.76 -> 4.96
- [54:56] Using cautious pH adjust
- [54:56] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [55:02] Stepping pH = 4.77



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- [55:02] Dispensed 0.000188 mL of Base (0.5 M KOH)
- [55:07] Stepping pH = 4.90
- [55:07] Dispensed 0.000071 mL of Base (0.5 M KOH)
- [55:12] Stepping pH = 5.01
- [55:27] Stirrer speed set to 0
- [55:39] Datapoint id 59 collected
- [55:39] Charge balance equation is out by -151.8%
- [55:39] Stirrer speed set to 60
- [55:44] pH 5.13 -> 5.33
- [55:44] Using cautious pH adjust
- [55:44] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [55:49] Stepping pH = 5.14
- [55:49] Dispensed 0.000094 mL of Base (0.5 M KOH)
- [55:54] Stepping pH = 5.17
- [55:54] Dispensed 0.000188 mL of Base (0.5 M KOH)
- [55:59] Stepping pH = 5.59
- [56:14] Stirrer speed set to 0
- [56:57] Datapoint id 60 collected
- [56:57] Charge balance equation is out by -376.9%
- [56:57] Stirrer speed set to 60
- [57:02] pH 6.13 -> 6.33
- [57:02] Using cautious pH adjust
- [57:02] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [57:07] Stepping pH = 6.17
- [57:07] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [57:12] Stepping pH = 6.29
- [57:12] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [57:17] Stepping pH = 6.46
- [57:32] Stirrer speed set to 0
- [58:32] Datapoint id 61 collected
- [58:32] Charge balance equation is out by -74.4%
- [58:32] Stirrer speed set to 60
- [58:37] pH 6.61 -> 6.81
- [58:37] Using cautious pH adjust
- [58:37] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [58:43] Stepping pH = 6.59
- [58:43] Dispensed 0.000094 mL of Base (0.5 M KOH)
- [58:48] Stepping pH = 6.63
- [58:48] Dispensed 0.000212 mL of Base (0.5 M KOH)
- [58:53] Stepping pH = 7.68
- [59:08] Stirrer speed set to 0
- [59:40] Datapoint id 62 collected
- [59:40] Charge balance equation is out by -805.8%
- [59:40] Stirrer speed set to 60
- [59:45] pH 8.62 -> 8.82
- [59:45] Using cautious pH adjust
- [59:45] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [59:50] Stepping pH = 8.65
- [59:50] Dispensed 0.000024 mL of Base (0.5 M KOH)
- [59:55] Stepping pH = 8.68
- [59:55] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [1:00:01] Stepping pH = 8.75
- [1:00:01] Dispensed 0.000047 mL of Base (0.5 M KOH)
- [1:00:06] Stepping pH = 8.87
- [1:00:21] Stirrer speed set to 0
- [1:00:38] Datapoint id 63 collected
- [1:00:38] Charge balance equation is out by -507.2%
- [1:00:38] Stirrer speed set to 60
- [1:00:43] pH 8.96 -> 9.05

# **Experiment Log**



Sample name: M09\_octanol Experiment start time: 3/2/2018 10:00:20 PM

Assay name: pH-metric high logP Analyst: Pion
Assay ID: 18C-02010 Instrument ID: T312060

Filename: C:\Sirius\_T3\Mehtap\20180302\_exp29\_logP\_T3-2\18C-02010\_M09\_octanol\_pH-metric high logP.t3r

# **Experiment Log (continued)**

[1:00:43] Using cautious pH adjust

[1:00:43] Dispensed 0.000024 mL of Base (0.5 M KOH)

[1:00:49] Stepping pH = 8.96

[1:00:49] Dispensed 0.000047 mL of Base (0.5 M KOH)

[1:00:54] Stepping pH = 9.00

[1:01:09] Stirrer speed set to 0

[1:01:24] Datapoint id 64 collected

[1:01:24] Charge balance equation is out by -267.3%

[1:01:24] Argon flow rate set to 0

[1:01:28] Titrator arm moved over Titration position

Reported at: 3/6/2018 11:33:29 AM