

Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07	Analysis adsorptive: N2
Completed: 11/07/2018 03:08:45	Analysis bath temp.: -195.854 °C
Report time: 11/07/2018 09:59:08	Thermal correction: No
Sample mass: 0.2616 g	Warm free space: 20.8981 cm <sup>3</sup> Measured
Cold free space: 58.7385 cm <sup>3</sup>	Equilibration interval: 10 s
Low pressure dose: 3.0000 cm <sup>3</sup> /g STP	Sample density: 1.000 g/cm <sup>3</sup>
Automatic degas: No	

### Summary Report

No summary reports could be produced.

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 Report time: 11/07/2018 09:59:08  
 Sample mass: 0.2616 g  
 Cold free space: 58.7385 cm<sup>3</sup>  
 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

## Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mbar)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Elapsed Time (h:min)	Saturation Pressure (mbar)
0.000000208	0.000210	2.9047	00:47	1009.550918
0.000000622	0.000628	5.8228	01:39	1010.165532
0.000000898	0.000906	8.7271	02:41	1009.576876
0.000001327	0.001339	11.6526	04:30	1009.011086
0.000001957	0.001974	14.5737	06:30	1009.012876
0.000002652	0.002676	17.4763	08:08	1008.881295
0.000003392	0.003421	20.3972	09:40	1008.990661
0.000004211	0.004247	23.3191	11:16	1008.654670
0.000005143	0.005191	26.2479	12:56	1008.752399
0.000006228	0.006286	29.1481	14:36	1009.201581
0.000007579	0.007648	32.0663	16:09	1009.272051
0.000009109	0.009186	34.9775	17:25	1009.137052
0.000011811	0.011909	37.8813	18:43	1008.408515
0.000015092	0.015214	40.7828	19:11	1008.334058
0.000018568	0.018712	43.6729	19:35	1008.124847
0.000025462	0.025662	46.5457	20:09	1007.781287
0.000039539	0.039835	49.3905	20:40	1007.825392
0.000093837	0.094526	52.2180	21:24	1007.502990
0.000314251	0.316510	54.9397	21:46	1007.339104
0.000996482	1.003694	57.4523	21:57	1007.190516
0.002501962	2.519977	59.5894	22:11	1007.237712
0.004739452	4.772990	59.5894	22:22	1007.200199
0.007567120	7.619892	61.4213	22:32	1007.076430
0.011163102	11.241493	62.9997	22:42	1006.973818
0.020016962	20.153745	64.2678	22:51	1007.022316
0.028772658	28.968900	66.1971	23:01	1006.833367
0.039162303	39.428977	67.5502	23:09	1006.820429
0.051495688	51.844869	68.9314	23:17	1006.809443
0.058535665	58.930531	70.4001	23:25	1006.780800
0.069417160	69.884650	71.1922	23:32	1006.745728
0.079355317	79.894256	72.3670	23:39	1006.734498
0.089218516	89.812642	73.3885	23:46	1006.791460
0.099198954	99.868987	74.3591	23:53	1006.659228
0.118089788	118.884660	75.3063	24:00	1006.754435
0.138660783	139.592190	76.9966	24:07	1006.731081
0.158786321	159.810676	78.7144	24:15	1006.717166
0.179202177	180.367513	80.2687	24:21	1006.451156
0.199628529	200.909183	81.7526	24:27	1006.502909
0.229634743	231.096812	83.1570	24:33	1006.415189
		85.1063	24:39	1006.366934

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 Completed: 11/07/2018 03:08:45  
 Report time: 11/07/2018 09:59:08  
 Sample mass: 0.2616 g  
 Cold free space: 58.7385 cm<sup>3</sup>  
 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

## Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mbar)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Elapsed Time (h:min)	Saturation Pressure (mbar)
0.261526186	263.182560	87.0740	24:44	1006.333490
0.292775875	294.613372	88.9134	24:49	1006.276121
0.302200900	304.075467	89.4682	24:52	1006.203048
0.311752157	313.700735	90.0141	24:55	1006.250407
0.320584208	322.572546	90.5214	24:58	1006.202234
0.330530699	332.574757	91.0800	25:01	1006.184169
0.340620801	342.705416	91.6412	25:04	1006.120047
0.349269613	351.398917	92.1305	25:07	1006.096448
0.359374452	361.567436	92.6863	25:10	1006.102226
0.369322578	371.544441	93.2361	25:13	1006.016051
0.379486665	381.784406	93.7920	25:16	1006.054867
0.389107562	391.448327	94.3277	25:19	1006.015726
0.399458728	401.855066	94.8903	25:22	1005.998963
0.409226278	411.653172	95.4243	25:25	1005.930446
0.419286138	421.790809	95.9726	25:28	1005.973656
0.429271505	431.832263	96.5177	25:31	1005.965356
0.439328539	441.943535	97.0623	25:34	1005.952254
0.449114279	451.768372	97.6035	25:37	1005.909615
0.459378338	462.091256	98.1662	25:40	1005.905627
0.469413830	472.145485	98.7089	25:43	1005.819290
0.479341099	482.105443	99.2490	25:46	1005.766967
0.489204396	492.052015	99.7934	25:49	1005.820918
0.499190434	502.087772	100.3409	25:52	1005.804073
0.509102146	512.068114	100.8860	25:56	1005.825881
0.519168589	522.184838	101.4365	25:59	1005.809769
0.529120827	532.170226	101.9894	26:02	1005.763142
0.539259112	542.382035	102.5487	26:05	1005.791135
0.549470413	552.611380	103.1114	26:08	1005.716353
0.559385350	562.586636	103.6671	26:11	1005.722863
0.569395826	572.686231	104.2276	26:14	1005.778766
0.579221145	582.578934	104.7812	26:17	1005.797075
0.589529072	592.900516	105.3577	26:20	1005.718875
0.599252717	602.694105	105.9071	26:23	1005.742799
0.609389872	612.874748	106.4915	26:26	1005.718631
0.619474393	622.968647	107.0741	26:29	1005.640675
0.629517006	632.996959	107.6447	26:32	1005.527973
0.639288525	642.891370	108.2183	26:35	1005.635711
0.649326509	652.952638	108.8096	26:38	1005.584446
0.659419441	663.089055	109.4109	26:41	1005.564916
0.669264155	672.994981	110.0041	26:44	1005.574519

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 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

## Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mbar)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Elapsed Time (h:min)	Saturation Pressure (mbar)
0.679165111	682.943669	110.6042	26:47	1005.563533
0.689191352	693.036347	111.2235	26:50	1005.578994
0.699506418	703.353860	111.8644	26:53	1005.500225
0.709614427	713.528725	112.5057	26:56	1005.516092
0.719066151	723.046337	113.1291	26:59	1005.535215
0.729172625	733.222993	113.7968	27:02	1005.554745
0.739261099	743.329667	114.4827	27:05	1005.503561
0.749331403	753.467833	115.1887	27:08	1005.520161
0.759289766	763.476534	115.9084	27:11	1005.514058
0.769561789	773.801126	116.6608	27:14	1005.508769
0.779551913	783.841400	117.4205	27:17	1005.502503
0.789701045	794.049140	118.2222	27:20	1005.506002
0.799608055	804.021304	119.0459	27:23	1005.519266
0.809370078	813.868886	119.8865	27:26	1005.558407
0.819079541	823.646648	120.7437	27:29	1005.575902
0.829481243	834.150425	121.6832	27:32	1005.629039
0.839498508	844.216494	122.6438	27:34	1005.620006
0.849532823	854.254734	123.6658	27:38	1005.558244
0.859006332	863.808719	124.7140	27:41	1005.590631
0.869530315	874.450831	125.9611	27:45	1005.658822
0.879680139	884.555227	127.1497	27:48	1005.541888
0.889246530	894.158281	128.4321	27:52	1005.523497
0.899612751	904.583370	129.8801	27:57	1005.525288
0.909337393	914.346648	131.3965	28:01	1005.508687
0.919354067	924.427853	133.1542	28:07	1005.518859
0.929208935	934.304973	135.1421	28:13	1005.484275
0.939263952	944.348257	137.4568	28:19	1005.413073
0.948822076	953.986301	140.1660	28:27	1005.442775
0.983860858	989.337162	159.6271	29:04	1005.566137
0.996706697	1002.335852	167.5529	29:15	1005.647755
0.994431794	1000.074481	165.9642	29:19	1005.674283
0.968059625	973.491619	164.6399	29:22	1005.611218
0.957553344	962.951630	159.8401	29:35	1005.637583
0.948954631	954.409769	154.6041	29:49	1005.748577
0.939562507	944.889798	149.2575	30:03	1005.669970
0.928440075	933.826089	144.2744	30:16	1005.801144
0.916212101	921.571316	139.9853	30:27	1005.849317
0.898193985	903.514610	135.0626	30:39	1005.923692
0.883114491	888.372379	131.9148	30:47	1005.953801
0.863309066	868.474678	128.6048	30:55	1005.983502



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 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

### Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mbar)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Elapsed Time (h:min)	Saturation Pressure (mbar)
0.842009103	847.050897	125.7559	31:02	1005.987815
0.820683707	825.602217	123.3452	31:08	1005.993185
0.799616804	804.422720	121.3172	31:14	1006.010274
0.778772954	783.438764	119.5490	31:18	1005.991232
0.758226017	762.802598	117.9484	31:22	1006.035906
0.737822639	742.270184	116.4855	31:26	1006.027932
0.718058713	722.381922	115.1413	31:30	1006.020690
0.697376228	701.570884	113.8310	31:34	1006.014912
0.677529620	681.649504	112.6205	31:37	1006.080743
0.656994821	660.945839	111.4306	31:40	1006.013773
0.636865533	640.690989	110.2818	31:44	1006.006693
0.616833544	620.559706	109.1491	31:47	1006.040789
0.596664195	600.244192	108.0344	31:50	1006.000021
0.576668219	580.075355	106.9442	31:54	1005.908313
0.556618933	559.926047	105.8690	31:57	1005.941432
0.528615850	531.742648	104.3783	32:01	1005.915067
0.507183623	510.144729	103.2337	32:04	1005.838332
0.487689365	490.519751	101.8536	32:10	1005.803666
0.473215347	475.945019	98.5616	32:24	1005.768350
0.452575840	455.208479	95.7546	32:33	1005.817012
0.428794835	431.269565	94.1756	32:38	1005.771361
0.407090747	409.413813	92.9586	32:42	1005.706506
0.386446199	388.671740	91.8802	32:46	1005.758992
0.358345570	360.401027	90.4604	32:50	1005.735964
0.336622457	338.550545	89.3685	32:55	1005.727745
0.308169341	309.919185	87.9232	32:59	1005.678188
0.286400220	288.036336	86.8089	33:04	1005.712691
0.258319963	259.808487	85.3397	33:09	1005.762329
0.236821901	238.188821	84.1741	33:14	1005.771931
0.216554444	217.791588	83.0369	33:20	1005.712854
0.188732080	189.801248	81.4010	33:26	1005.665006
0.167140929	168.094339	80.0345	33:33	1005.704228
0.146861468	147.702701	78.6759	33:39	1005.728070
0.127050790	127.785938	77.2328	33:47	1005.786252
0.108696232	109.330969	75.7992	33:55	1005.839552
0.091549313	92.084561	74.3590	34:03	1005.846550
0.074722628	75.158026	72.8293	34:12	1005.826858

Sample: toyin\_A

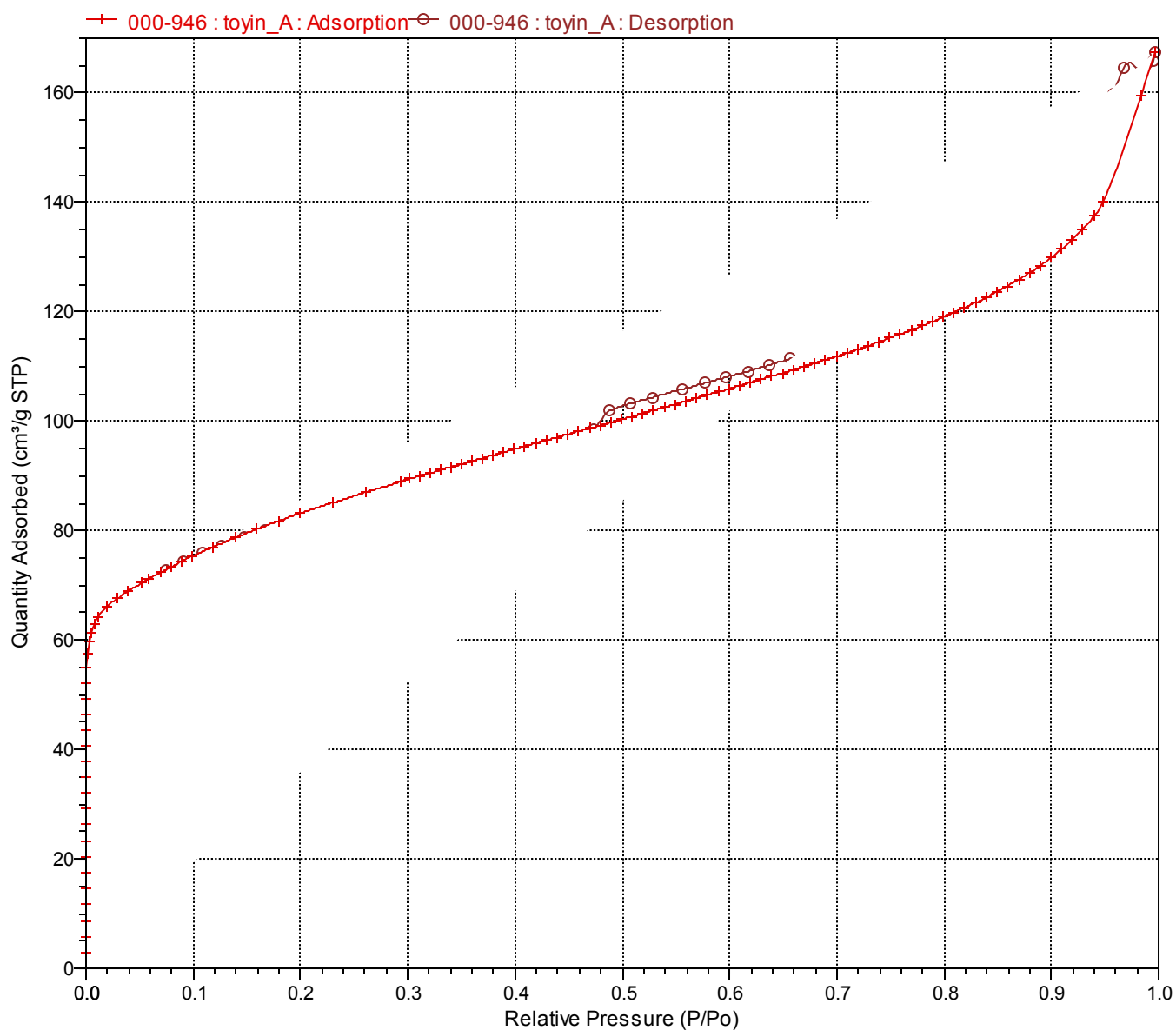
Operator:

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Cold free space: 58.7385 cm<sup>3</sup>  
Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
Automatic degas: No

Analysis adsorptive: N<sub>2</sub>  
Analysis bath temp.: -195.854 °C  
Thermal correction: No  
Warm free space: 20.8981 cm<sup>3</sup> Measured  
Equilibration interval: 10 s  
Sample density: 1.000 g/cm<sup>3</sup>

### Isotherm Linear Plot



Sample: toyin\_A

Operator:

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Started: 09/07/2018 15:27:07

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Sample mass: 0.2616 g

Cold free space: 58.7385 cm<sup>3</sup>Low pressure dose: 3.0000 cm<sup>3</sup>/g STP

Automatic degas: No

Analysis adsorptive: N2

Analysis bath temp.: -195.854 °C

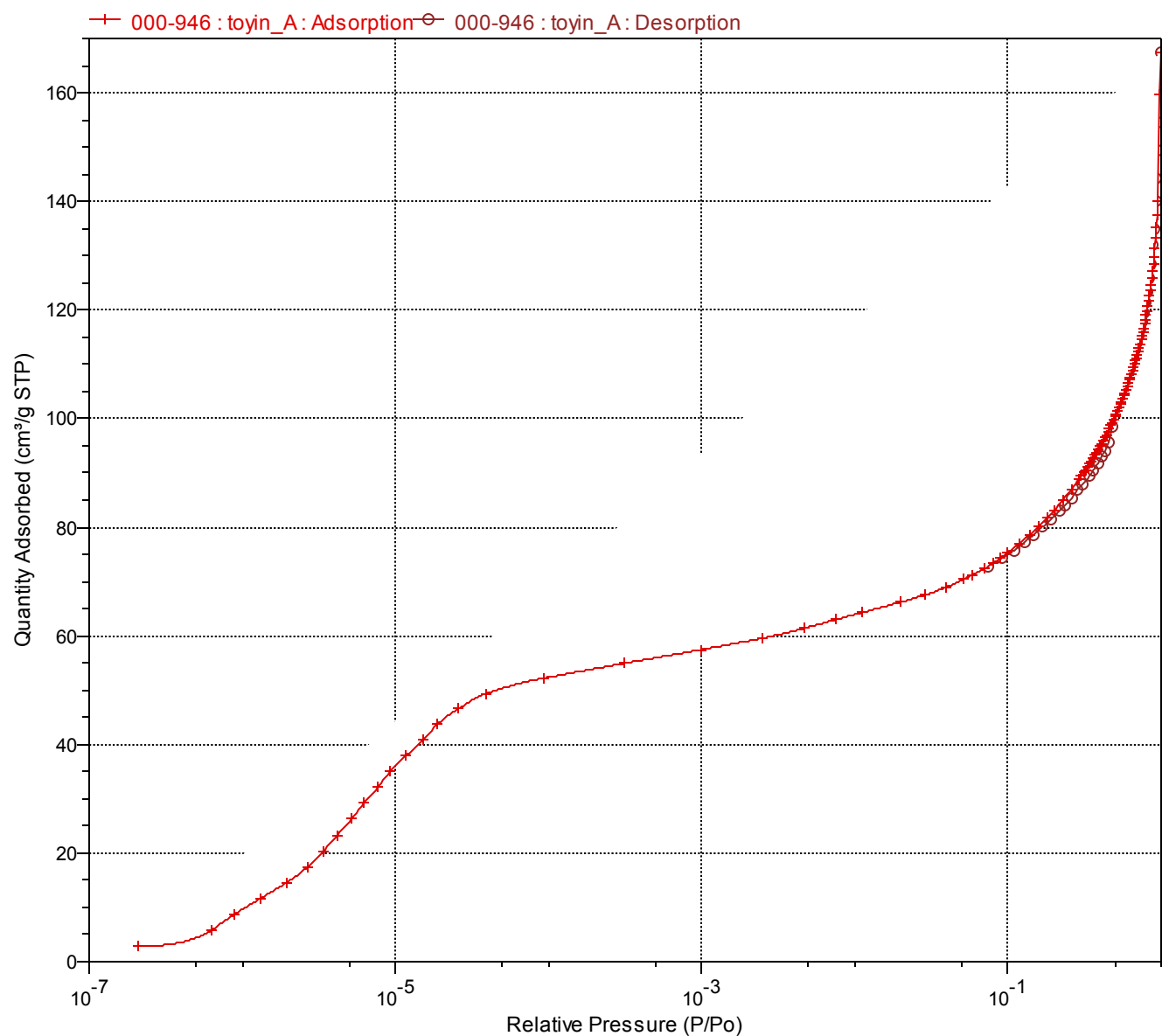
Thermal correction: No

Warm free space: 20.8981 cm<sup>3</sup> Measured

Equilibration interval: 10 s

Sample density: 1.000 g/cm<sup>3</sup>

## Isotherm Log Plot



Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07	Analysis adsorptive: N2
Completed: 11/07/2018 03:08:45	Analysis bath temp.: -195.854 °C
Report time: 11/07/2018 09:59:08	Thermal correction: No
Sample mass: 0.2616 g	Warm free space: 20.8981 cm <sup>3</sup> Measured
Cold free space: 58.7385 cm <sup>3</sup>	Equilibration interval: 10 s
Low pressure dose: 3.0000 cm <sup>3</sup> /g STP	Sample density: 1.000 g/cm <sup>3</sup>
Automatic degas: No	

**BET Report**

BET surface area: 297.2784 ± 0.5386 m<sup>2</sup>/g  
Slope: 0.014627 ± 0.000026 g/cm<sup>3</sup> STP  
Y-intercept: 0.000014 ± 0.000002 g/cm<sup>3</sup> STP  
C: 1043.552042  
Qm: 68.2994 cm<sup>3</sup>/g STP  
Correlation coefficient: 0.9999820  
Molecular cross-sectional area: 0.1620 nm<sup>2</sup>

Relative Pressure (P/Po)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	1/[Q(Po/P - 1)]
0.004739452	61.4213	0.000078
0.007567120	62.9997	0.000121
0.011163102	64.2678	0.000176
0.020016962	66.1971	0.000309
0.028772658	67.5502	0.000439
0.039162303	68.9314	0.000591
0.051495688	70.4001	0.000771
0.058535665	71.1922	0.000873
0.069417160	72.3670	0.001031
0.079355317	73.3885	0.001175
0.089218516	74.3591	0.001317
0.099198954	75.3063	0.001462
0.118089788	76.9966	0.001739

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 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

### BJH Adsorption Pore Distribution Report

Faas Correction

Harkins and Jura

$$t = [13.99 / (0.034 - \log(P/P_o))]^{0.5}$$

Diameter range: 1.0000 nm to 300.0000 nm

Adsorbate property factor: 0.95300 nm

Density conversion factor: 0.0015492

Fraction of pores open at both ends: 0.00

Pore Diameter Range (nm)	Average Diameter (nm)	Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)
120.5 - 39.1	46.3	0.034233	0.034233	2.956	2.956
39.1 - 33.2	35.6	0.004737	0.038970	0.532	3.488
33.2 - 28.6	30.5	0.004079	0.043049	0.535	4.023
28.6 - 25.2	26.7	0.003535	0.046584	0.530	4.553
25.2 - 22.5	23.7	0.003144	0.049728	0.531	5.084
22.5 - 20.4	21.3	0.002727	0.052455	0.512	5.596
20.4 - 18.5	19.4	0.002615	0.055071	0.541	6.137
18.5 - 17.1	17.7	0.002339	0.057409	0.528	6.664
17.1 - 15.8	16.4	0.002162	0.059571	0.528	7.192
15.8 - 14.6	15.1	0.002303	0.061875	0.608	7.800
14.6 - 13.7	14.1	0.001942	0.063817	0.550	8.350
13.7 - 12.9	13.3	0.001892	0.065709	0.571	8.921
12.9 - 12.1	12.5	0.001783	0.067492	0.572	9.493
12.1 - 11.4	11.7	0.001746	0.069238	0.595	10.088
11.4 - 10.8	11.1	0.001604	0.070842	0.578	10.666
10.8 - 10.3	10.6	0.001583	0.072425	0.600	11.266
10.3 - 9.8	10.0	0.001556	0.073980	0.620	11.885
9.8 - 9.3	9.6	0.001513	0.075493	0.633	12.518
9.3 - 8.9	9.1	0.001436	0.076929	0.629	13.147
8.9 - 8.5	8.7	0.001423	0.078353	0.652	13.799
8.5 - 8.2	8.4	0.001370	0.079723	0.656	14.455
8.2 - 7.9	8.0	0.001346	0.081069	0.671	15.126
7.9 - 7.6	7.7	0.001309	0.082378	0.680	15.806
7.6 - 7.3	7.4	0.001275	0.083652	0.689	16.495
7.3 - 7.0	7.1	0.001199	0.084852	0.672	17.167
7.0 - 6.8	6.9	0.001230	0.086081	0.714	17.881
6.8 - 6.5	6.6	0.001231	0.087312	0.741	18.622
6.5 - 6.3	6.4	0.001196	0.088508	0.746	19.369
6.3 - 6.1	6.2	0.001160	0.089668	0.749	20.118
6.1 - 5.9	6.0	0.001152	0.090820	0.769	20.886
5.9 - 5.7	5.8	0.001171	0.091991	0.807	21.693

Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07  
 Completed: 11/07/2018 03:08:45  
 Report time: 11/07/2018 09:59:08  
 Sample mass: 0.2616 g  
 Cold free space: 58.7385 cm<sup>3</sup>  
 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

Pore Diameter Range (nm)	Average Diameter (nm)	Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)
5.7 - 5.5	5.6	0.001154	0.093146	0.821	22.514
5.5 - 5.4	5.5	0.001125	0.094270	0.825	23.339
5.4 - 5.2	5.3	0.001112	0.095383	0.841	24.180
5.2 - 5.1	5.1	0.001148	0.096531	0.895	25.075
5.1 - 4.9	5.0	0.001157	0.097688	0.929	26.004
4.9 - 4.8	4.8	0.001084	0.098772	0.896	26.900
4.8 - 4.6	4.7	0.001138	0.099911	0.968	27.867
4.6 - 4.5	4.6	0.001100	0.101011	0.962	28.830
4.5 - 4.4	4.5	0.001115	0.102126	1.003	29.832
4.4 - 4.3	4.3	0.001110	0.103236	1.025	30.857
4.3 - 4.2	4.2	0.001120	0.104356	1.063	31.920
4.2 - 4.0	4.1	0.001116	0.105473	1.089	33.009
4.0 - 3.9	4.0	0.001110	0.106582	1.111	34.119
3.9 - 3.8	3.9	0.001099	0.107682	1.130	35.249
3.8 - 3.7	3.8	0.001094	0.108775	1.153	36.402
3.7 - 3.7	3.7	0.001098	0.109873	1.188	37.590
3.7 - 3.6	3.6	0.001096	0.110970	1.216	38.806
3.6 - 3.5	3.5	0.001081	0.112051	1.230	40.036
3.5 - 3.4	3.4	0.001084	0.113134	1.263	41.299
3.4 - 3.3	3.3	0.001131	0.114265	1.352	42.651
3.3 - 3.2	3.3	0.001092	0.115357	1.338	43.990
3.2 - 3.1	3.2	0.001087	0.116444	1.365	45.354
3.1 - 3.1	3.1	0.001090	0.117534	1.403	46.758
3.1 - 3.0	3.0	0.001094	0.118629	1.443	48.201
3.0 - 2.9	3.0	0.001065	0.119694	1.439	49.641
2.9 - 2.9	2.9	0.001116	0.120810	1.545	51.185
2.9 - 2.8	2.8	0.001074	0.121883	1.523	52.708
2.8 - 2.7	2.8	0.001099	0.122982	1.596	54.304
2.7 - 2.7	2.7	0.001089	0.124071	1.621	55.925
2.7 - 2.6	2.6	0.001093	0.125164	1.666	57.592
2.6 - 2.5	2.6	0.000973	0.126137	1.519	59.110
2.5 - 2.5	2.5	0.001098	0.127236	1.753	60.863
2.5 - 2.4	2.4	0.001093	0.128329	1.787	62.651
2.4 - 2.4	2.4	0.001000	0.129329	1.673	64.324
2.4 - 2.3	2.3	0.001064	0.130393	1.822	66.146
2.3 - 2.3	2.3	0.001093	0.131486	1.916	68.062
2.3 - 2.1	2.2	0.003555	0.135042	6.572	74.633
2.1 - 1.9	2.0	0.003771	0.138813	7.561	82.194
1.9 - 1.8	1.8	0.003674	0.142487	7.999	90.194
1.8 - 1.7	1.7	0.002609	0.145096	6.087	96.281
1.7 - 1.6	1.6	0.002722	0.147818	6.745	103.026

Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07	Analysis adsorptive: N2
Completed: 11/07/2018 03:08:45	Analysis bath temp.: -195.854 °C
Report time: 11/07/2018 09:59:08	Thermal correction: No
Sample mass: 0.2616 g	Warm free space: 20.8981 cm <sup>3</sup> Measured
Cold free space: 58.7385 cm <sup>3</sup>	Equilibration interval: 10 s
Low pressure dose: 3.0000 cm <sup>3</sup> /g STP	Sample density: 1.000 g/cm <sup>3</sup>
Automatic degas: No	

Pore Diameter Range (nm)	Average Diameter (nm)	Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)
1.6 - 1.5	1.5	0.002794	0.150611	7.378	110.404
1.5 - 1.4	1.4	0.003025	0.153637	8.559	118.962
1.4 - 1.3	1.3	0.002829	0.156465	8.601	127.563
1.3 - 1.2	1.2	0.001507	0.157972	4.844	132.407
1.2 - 1.2	1.2	0.001457	0.159429	4.892	137.299
1.2 - 1.1	1.1	0.001432	0.160861	5.036	142.335
1.1 - 1.0	1.1	0.001489	0.162351	5.527	147.861
1.0 - 1.0	1.0	0.000875	0.163226	3.414	151.275

Sample: toyin\_A

Operator:

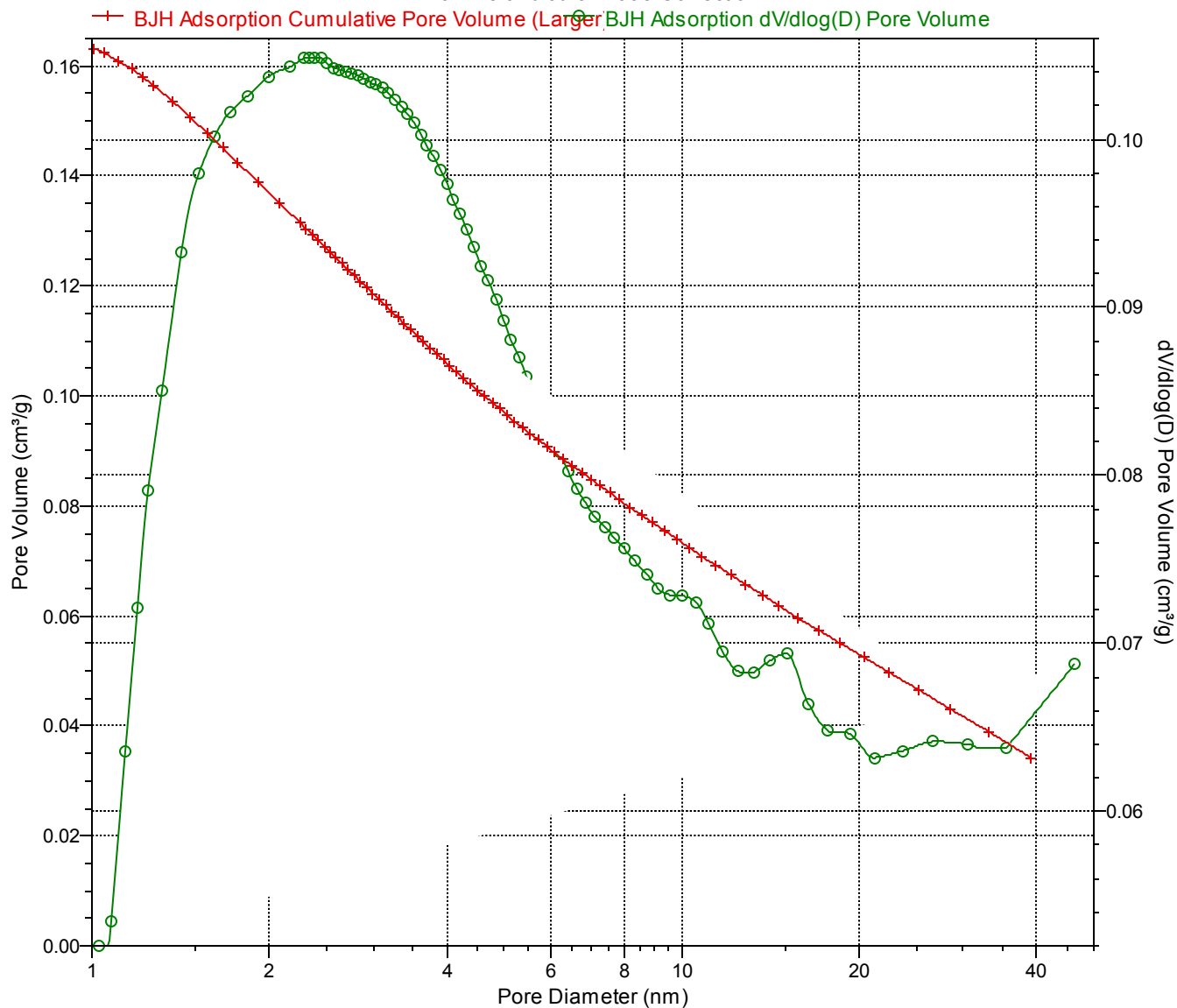
File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07  
Completed: 11/07/2018 03:08:45  
Report time: 11/07/2018 09:59:08  
Sample mass: 0.2616 g  
Cold free space: 58.7385 cm<sup>3</sup>  
Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
Automatic degas: No

Analysis adsorptive: N<sub>2</sub>  
Analysis bath temp.: -195.854 °C  
Thermal correction: No  
Warm free space: 20.8981 cm<sup>3</sup> Measured  
Equilibration interval: 10 s  
Sample density: 1.000 g/cm<sup>3</sup>

### BJH Adsorption Cumulative Pore Volume (Larger)

Harkins and Jura : Faas Correction





Sample: toyin\_A

Operator:

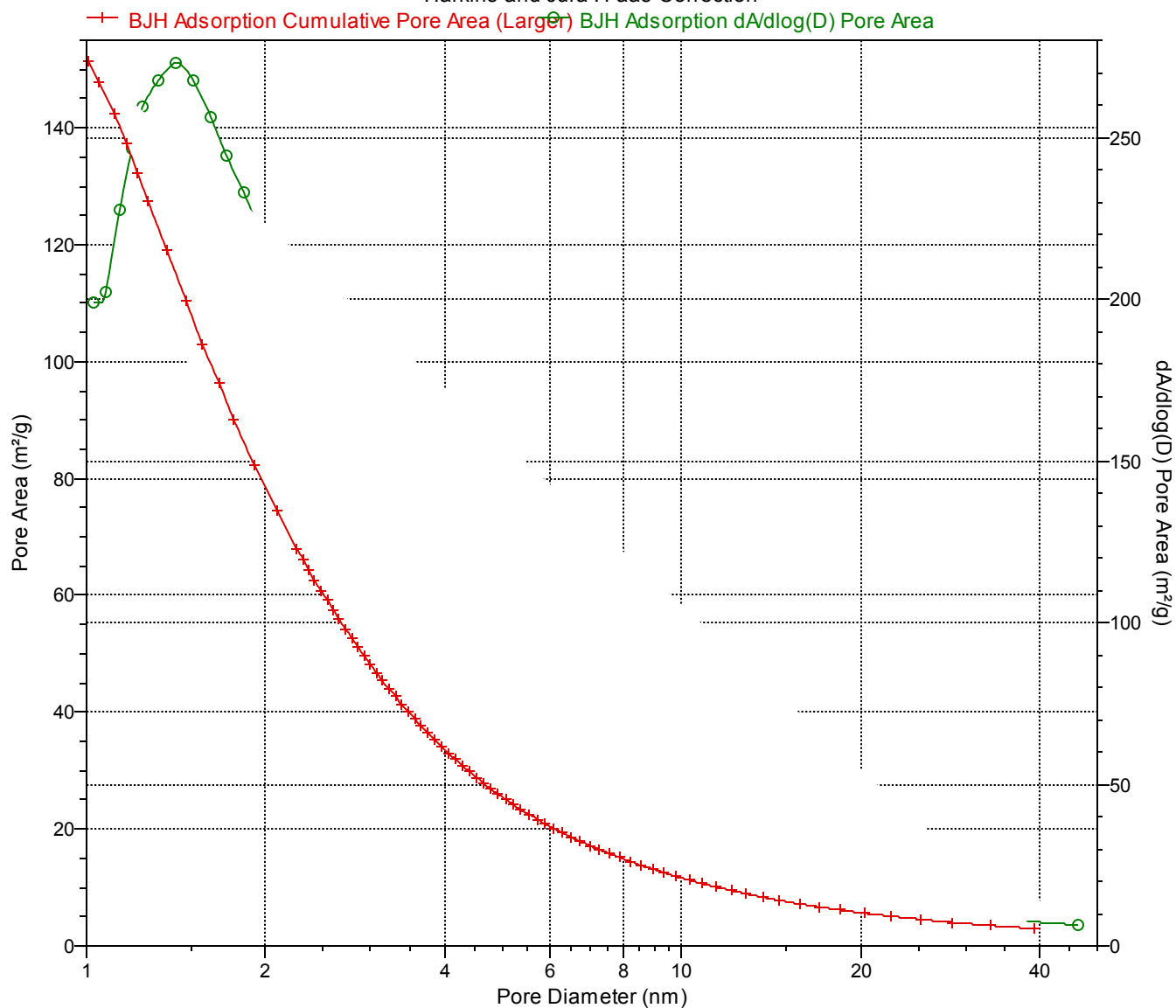
File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07  
Completed: 11/07/2018 03:08:45  
Report time: 11/07/2018 09:59:08  
Sample mass: 0.2616 g  
Cold free space: 58.7385 cm<sup>3</sup>  
Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
Automatic degas: No

Analysis adsorptive: N<sub>2</sub>  
Analysis bath temp.: -195.854 °C  
Thermal correction: No  
Warm free space: 20.8981 cm<sup>3</sup> Measured  
Equilibration interval: 10 s  
Sample density: 1.000 g/cm<sup>3</sup>

### BJH Adsorption Cumulative Pore Area (Larger)

Harkins and Jura : Faas Correction



Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

Started: 09/07/2018 15:27:07  
 Completed: 11/07/2018 03:08:45  
 Report time: 11/07/2018 09:59:08  
 Sample mass: 0.2616 g  
 Cold free space: 58.7385 cm<sup>3</sup>  
 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

### Horvath-Kawazoe Report

Cylinder Pore Geometry (Saito-Foley)

Maximum pore volume: 0.126652 cm<sup>3</sup>/g  
 at Relative Pressure: 0.179202177  
 Median pore width: 0.6332 nm  
 Relative pressure range: 2.082e-007 to 1.792e-001

Diameter of adsorptive molecule: 0.3000 nm  
 Adsorptive density: 6.710e+014 molecules/cm<sup>3</sup>  
 Adsorptive dispersion constant: 7.777e-059  
 Diameter of sample atom: 0.2760 nm  
 Sample Density: 1.310e+015 molecules/cm<sup>3</sup>  
 Sample dispersion constant: 8.957e-059

Density conversion factor: 0.0015492

Absolute Pressure (mbar)	Relative Pressure (P/Po)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Pore Width (nm)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Smoothed Differential Pore Volume (cm <sup>3</sup> /g·nm)
0.00021	0.000000208	2.90468	0.506	0.0045	0.0695
0.00063	0.000000622	5.82277	0.532	0.0090	0.3618
0.00091	0.000000898	8.72706	0.542	0.0135	0.4232
0.00134	0.000001327	11.65256	0.553	0.0181	0.4295
0.00197	0.000001957	14.57369	0.564	0.0226	0.4722
0.00268	0.000002652	17.47632	0.573	0.0271	0.5459
0.00342	0.000003392	20.39724	0.581	0.0316	0.6121
0.00425	0.000004211	23.31909	0.588	0.0361	0.6529
0.00519	0.000005143	26.24788	0.594	0.0407	0.6723
0.00629	0.000006228	29.14813	0.601	0.0452	0.6608
0.00765	0.000007579	32.06630	0.607	0.0497	0.6220
0.00919	0.000009109	34.97747	0.614	0.0542	0.5785
0.01191	0.000011811	37.88132	0.624	0.0587	0.5266
0.01521	0.000015092	40.78276	0.633	0.0632	0.4669
0.01871	0.000018568	43.67287	0.641	0.0677	0.4173
0.02566	0.000025462	46.54574	0.654	0.0721	0.3100
0.03984	0.000039539	49.39054	0.673	0.0765	0.1739
0.09453	0.000093837	52.21795	0.716	0.0809	0.0730
0.31651	0.000314251	54.93971	0.788	0.0851	0.0485
1.00369	0.000996482	57.45232	0.879	0.0890	0.0378
2.51998	0.002501962	59.58943	0.974	0.0923	0.0343
4.77299	0.004739452	61.42133	1.058	0.0952	0.0334
7.61989	0.007567120	62.99970	1.132	0.0976	0.0304

Sample: toyin\_A

Operator:

File: C:\3Flex\data\Remi Castaing\000-946.SMP

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 Low pressure dose: 3.0000 cm<sup>3</sup>/g STP  
 Automatic degas: No  
 Analysis adsorptive: N2  
 Analysis bath temp.: -195.854 °C  
 Thermal correction: No  
 Warm free space: 20.8981 cm<sup>3</sup> Measured  
 Equilibration interval: 10 s  
 Sample density: 1.000 g/cm<sup>3</sup>

Absolute Pressure (mbar)	Relative Pressure (P/Po)	Quantity Adsorbed (cm <sup>3</sup> /g STP)	Pore Width (nm)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Smoothed Differential Pore Volume (cm <sup>3</sup> /g·nm)
11.24149	0.011163102	64.26779	1.205	0.0996	0.0241
20.15375	0.020016962	66.19711	1.340	0.1026	0.0208
28.96890	0.028772658	67.55018	1.445	0.1046	0.0196
39.42898	0.039162303	68.93137	1.554	0.1068	0.0199
51.84487	0.051495688	70.40011	1.667	0.1091	0.0203
58.93053	0.058535665	71.19221	1.727	0.1103	0.0203
69.88465	0.069417160	72.36704	1.817	0.1121	0.0204
79.89426	0.079355317	73.38847	1.894	0.1137	0.0201
89.81264	0.089218516	74.35913	1.970	0.1152	0.0198
99.86899	0.099198954	75.30635	2.044	0.1167	0.0194
118.88466	0.118089788	76.99657	2.184	0.1193	0.0183
139.59219	0.138660783	78.71441	2.333	0.1219	0.0171
159.81068	0.158786321	80.26871	2.479	0.1244	0.0159
180.36751	0.179202177	81.75263	2.628	0.1267	0.0150

Sample: toyin\_A

Operator:

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Thermal correction: No  
Warm free space: 20.8981 cm<sup>3</sup> Measured  
Equilibration interval: 10 s  
Sample density: 1.000 g/cm<sup>3</sup>

### Horvath-Kawazoe Cumulative Pore Volume Plot

