

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:00	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Report Preparation Errors

4063- No subreports selected. Error generating Advanced Reports.

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Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Summary Report

Surface Area

Single point surface area at P/Po = 0.292748263: 548.6772 m²/g

BET Surface Area: 564.9856 m²/g

Langmuir Surface Area: 853.8369 m²/g

t-Plot Micropore Area: 51.8445 m²/g

t-Plot external surface area: 513.1411 m²/g

BJH Adsorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 308.9857 m²/g

BJH Desorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 266.3710 m²/g

D-H Adsorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 294.1240 m²/g

D-H Desorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 250.7995 m²/g

Pore Volume

Single point adsorption total pore volume of pores
less than 372.1214 nm width at P/Po = 0.994836732: 0.298938 cm³/g

t-Plot micropore volume: 0.023399 cm³/g

BJH Adsorption cumulative volume of pores
between 1.7000 nm and 300.0000 nm width: 0.174908 cm³/g

BJH Desorption cumulative volume of pores
between 1.7000 nm and 300.0000 nm width: 0.156074 cm³/g

Pore Size

Adsorption average pore diameter (4V/A by BET): 2.1164 nm

Desorption average pore diameter (4V/A by BET): 2.1145 nm

BJH Adsorption average pore width (4V/A): 2.2643 nm

BJH Desorption average pore width (4V/A): 2.3437 nm

Freundlich

Qm·C: 53.7133 ± 0.7571 cm³/g STP

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Freundlich

m: 4.7329 ± 0.1441

DFT Pore Size

Volume in Pores	<	0.804 nm	:	0.02360 cm ³ /g
Total Volume in Pores	<=	252.570 nm	:	0.25865 cm ³ /g
Area in Pores	>	252.570 nm	:	0.000 m ² /g
Total Area in Pores	>=	0.804 nm	:	261.876 m ² /g

Horvath-KawazoeMaximum pore volume at P/Po = 0.166340920: 0.237664 cm³/g

Median pore width: 0.6813 nm

Dubinin-AstakhovMicropore surface area: 491.6241 m²/g**Pass/Fail**

S A:Single-point BET: No range values were specified

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Thermal correction: No
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Validation errors exist for this report. Review the validation report for details.

Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	Elapsed Time (h:min)	Saturation Pressure (mmHg)
0.000009526	0.007248	11.9163	01:44	763.900269
0.000031240	0.023767	23.8343	05:17	760.853027
0.000111980	0.085284	35.6123	07:44	760.772522
0.000353382	0.269154	47.2740	09:35	761.593201
0.000960129	0.731078	58.5160	11:05	761.654114
0.002409210	1.834254	69.8457	12:46	761.437317
0.005326624	4.054148	80.5747	13:22	761.350586
0.010362489	7.885444	90.4213	14:17	761.110107
0.029839910	22.705696	108.1951	15:07	760.960388
0.051443133	39.146824	119.3015	15:16	760.917053
0.093514660	71.153618	134.2817	15:24	760.972778
0.126526362	96.273193	143.6408	15:31	760.881958
0.166340920	126.554810	153.6487	15:38	760.894348
0.207394457	157.804840	162.9293	15:45	760.815857
0.249378221	189.758972	171.2076	15:52	760.892273
0.292748263	222.788879	178.2364	15:59	760.928406
0.303513230	230.969696	179.6804	16:06	761.025452
0.354221735	269.538483	184.9862	16:09	760.987244
0.399682818	304.151062	187.6291	16:15	760.931519
0.448501203	341.279633	188.9984	16:18	760.981079
0.517624618	393.905731	190.0317	16:21	760.933594
0.568444661	432.541595	190.5729	16:23	760.987244
0.599454175	456.152832	190.8936	16:25	760.921204
0.649864304	494.549194	191.2976	16:27	760.946960
0.699682550	532.453125	191.6675	16:30	761.003784
0.749750827	570.515991	192.0051	16:32	760.992432
0.799583138	608.513855	192.0051	16:34	760.940796
0.849768819	646.714111	192.2982	16:36	761.038879
0.899760560	684.766663	192.5581	16:38	761.047119
0.949696323	722.745972	192.7918	16:39	761.054321
0.994836732	757.049866	193.0376	16:40	761.054321
0.926818232	705.226990	192.9890	16:42	761.028503
0.876672844	667.075317	192.7547	16:44	760.979004
0.826389212	628.869934	192.5202	16:46	760.911865
0.795349868	605.197754	192.3453	16:48	760.917053
0.745414693	567.219543	192.0509	16:51	760.985168
0.695331806	529.149414	191.7279	16:53	760.920166
0.645415885	491.143250	191.3532	16:55	760.944946
0.595339439	453.023590	190.9378	16:57	761.002747
0.545379799	415.011292	190.4365	16:59	760.971741
0.495387632	376.950439	189.8602	17:01	760.950073
0.445391686	338.969116	189.1731	17:03	760.958313
0.396927070	302.049072	187.7069	17:05	760.920166
0.347728285	264.588074	184.6852	17:08	761.058472
			17:12	760.968689
			17:16	760.904663

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Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Tabular Report

Relative Pressure (P/Po)	Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	Elapsed Time (h:min)	Saturation Pressure (mmHg)
0.298683493	227.297409	179.3208	17:22	760.997559
0.248700341	189.267548	171.2878	17:29	761.026489
0.198114552	150.771027	161.0037	17:37	761.029541
0.148061791	112.678177	149.1897	17:45	761.021301
0.094997302	72.295464	134.6987	17:56	761.026489
0.044578881	33.931091	116.1381	18:06	761.147217
0.010377986	7.898865	90.3350	18:22	761.117310

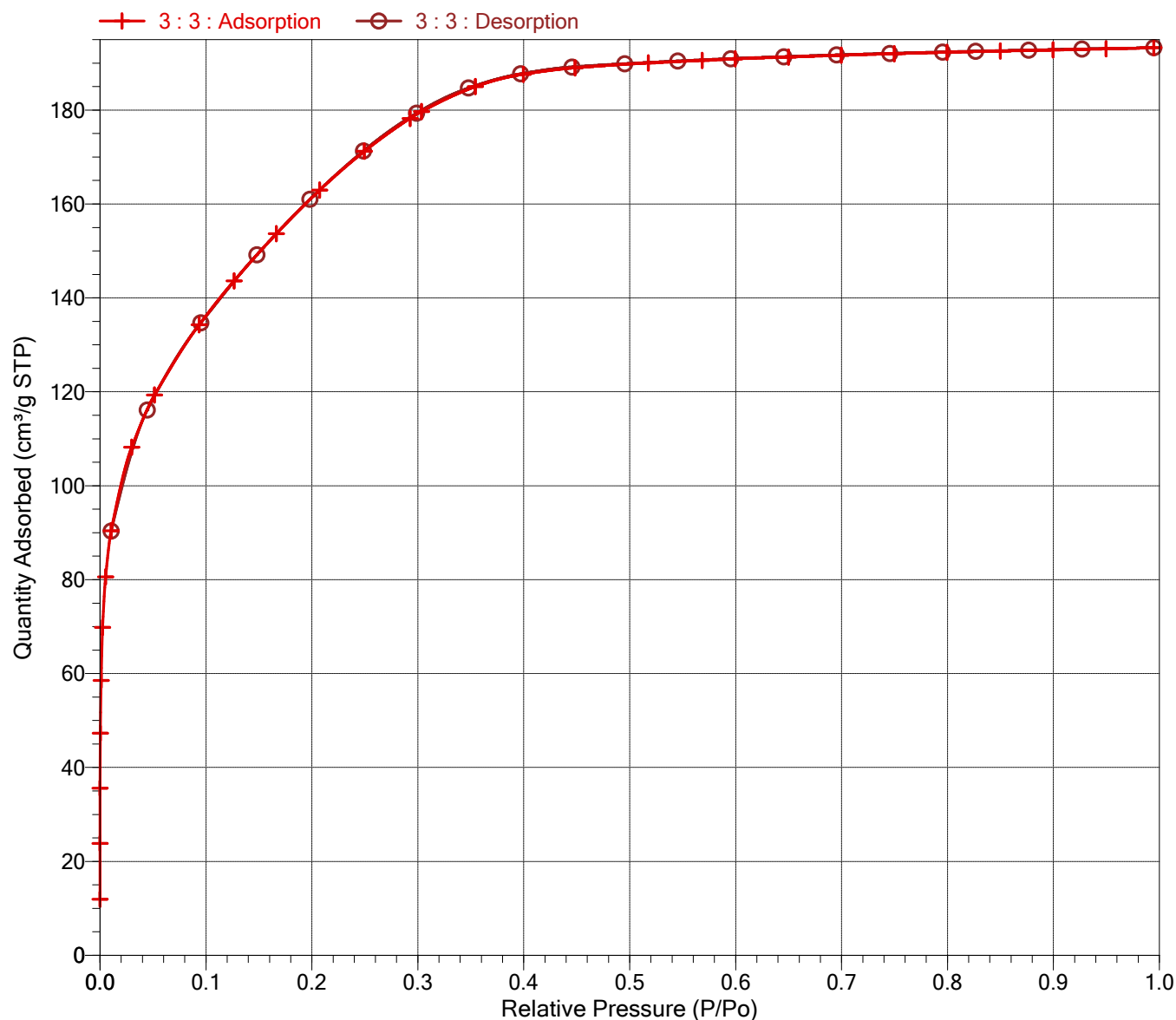
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Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Validation errors exist for this report. Review the validation report for details.

Isotherm Linear Plot



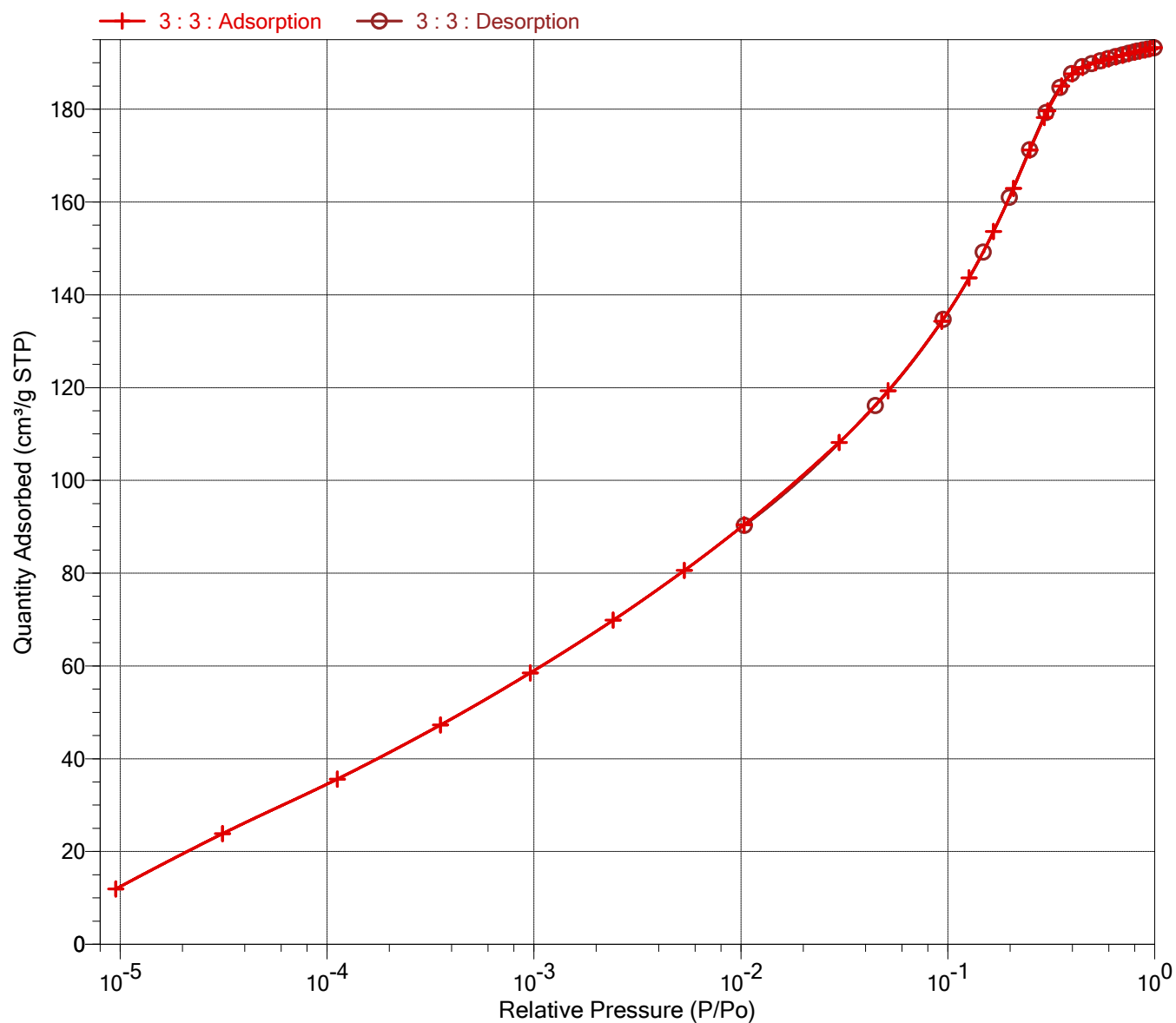
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Sample density: 1.000 g/cm³

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Isotherm Log Plot



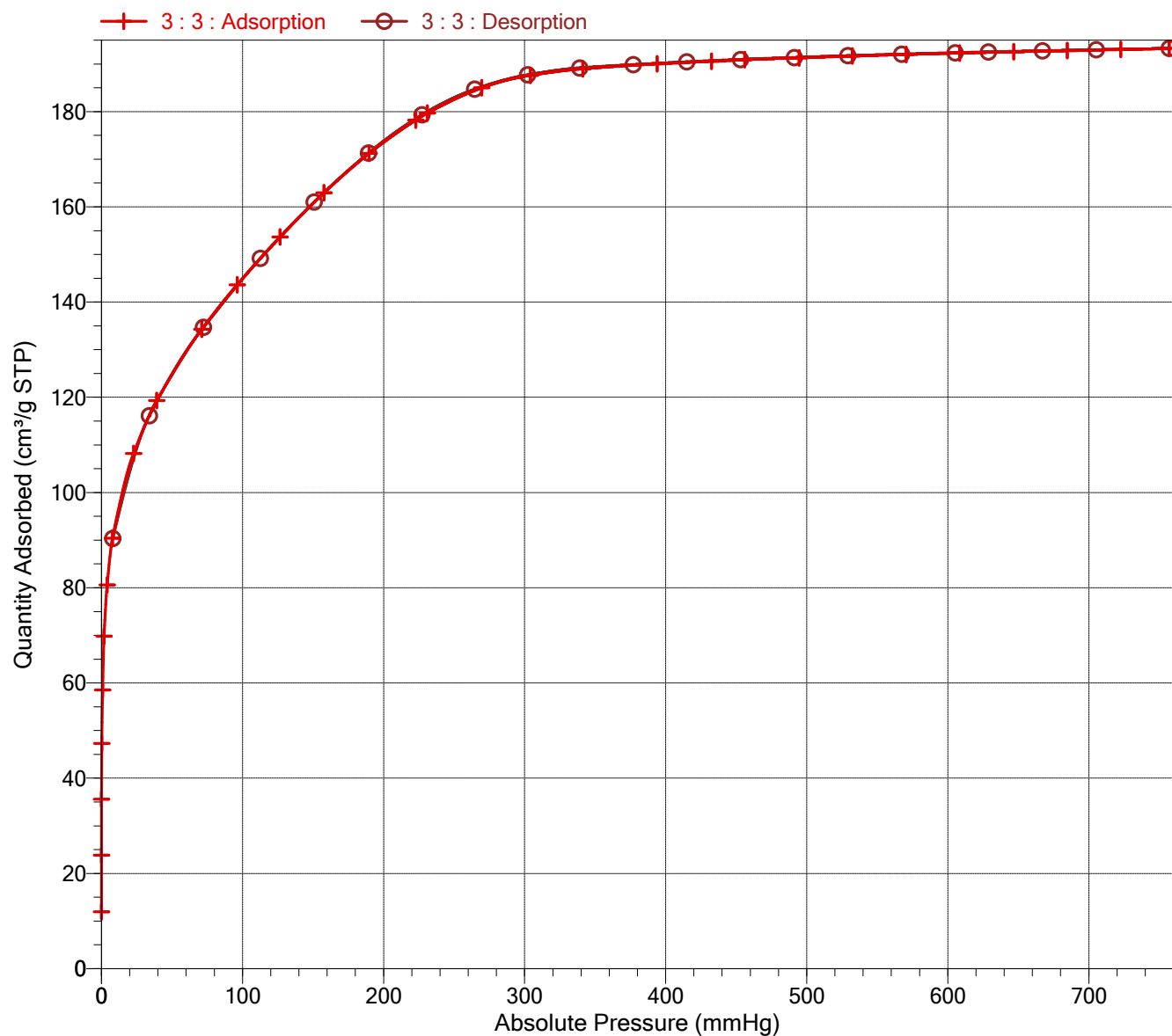
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Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

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Isotherm Linear Absolute Plot



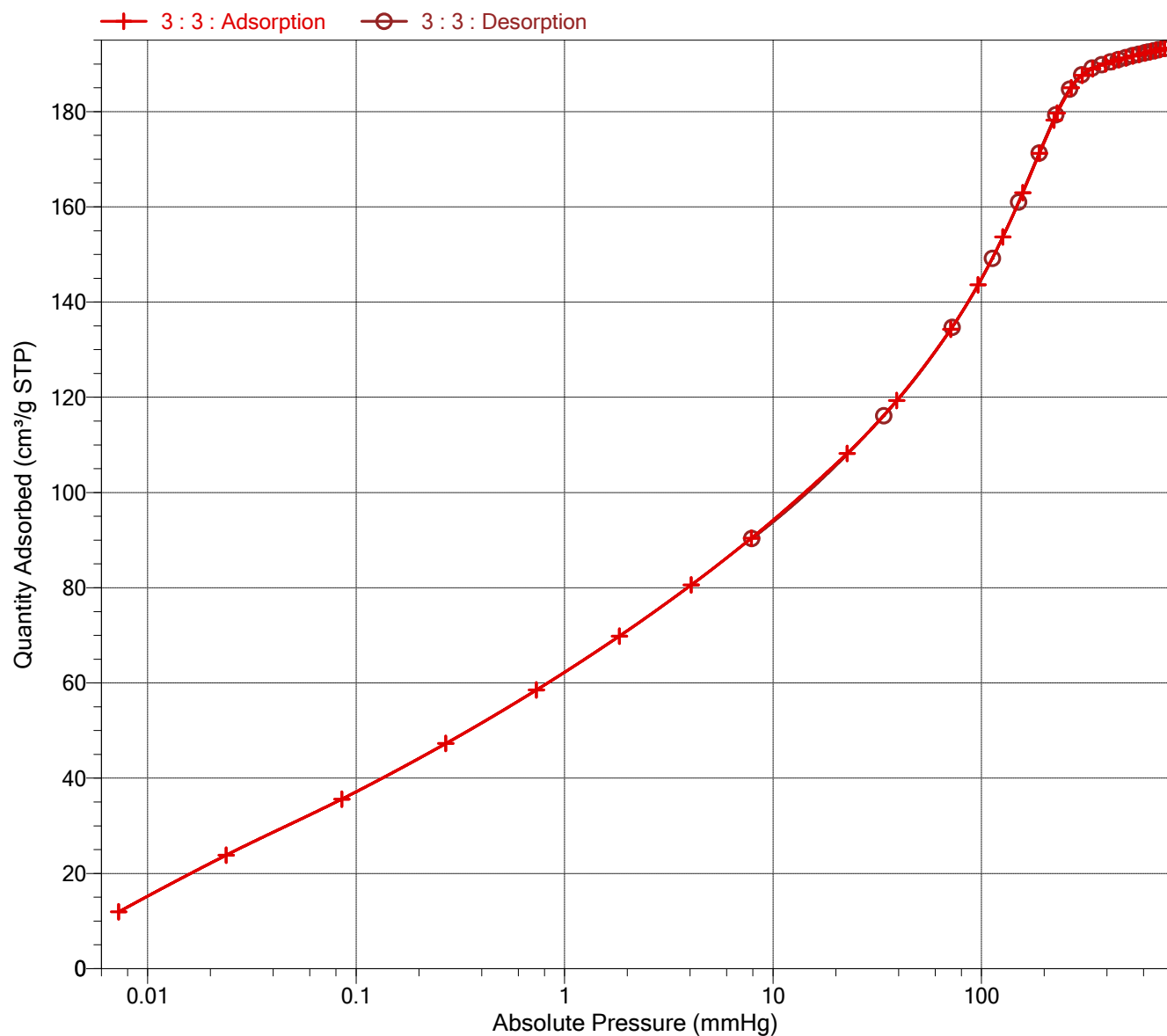
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Isotherm Log Absolute Plot



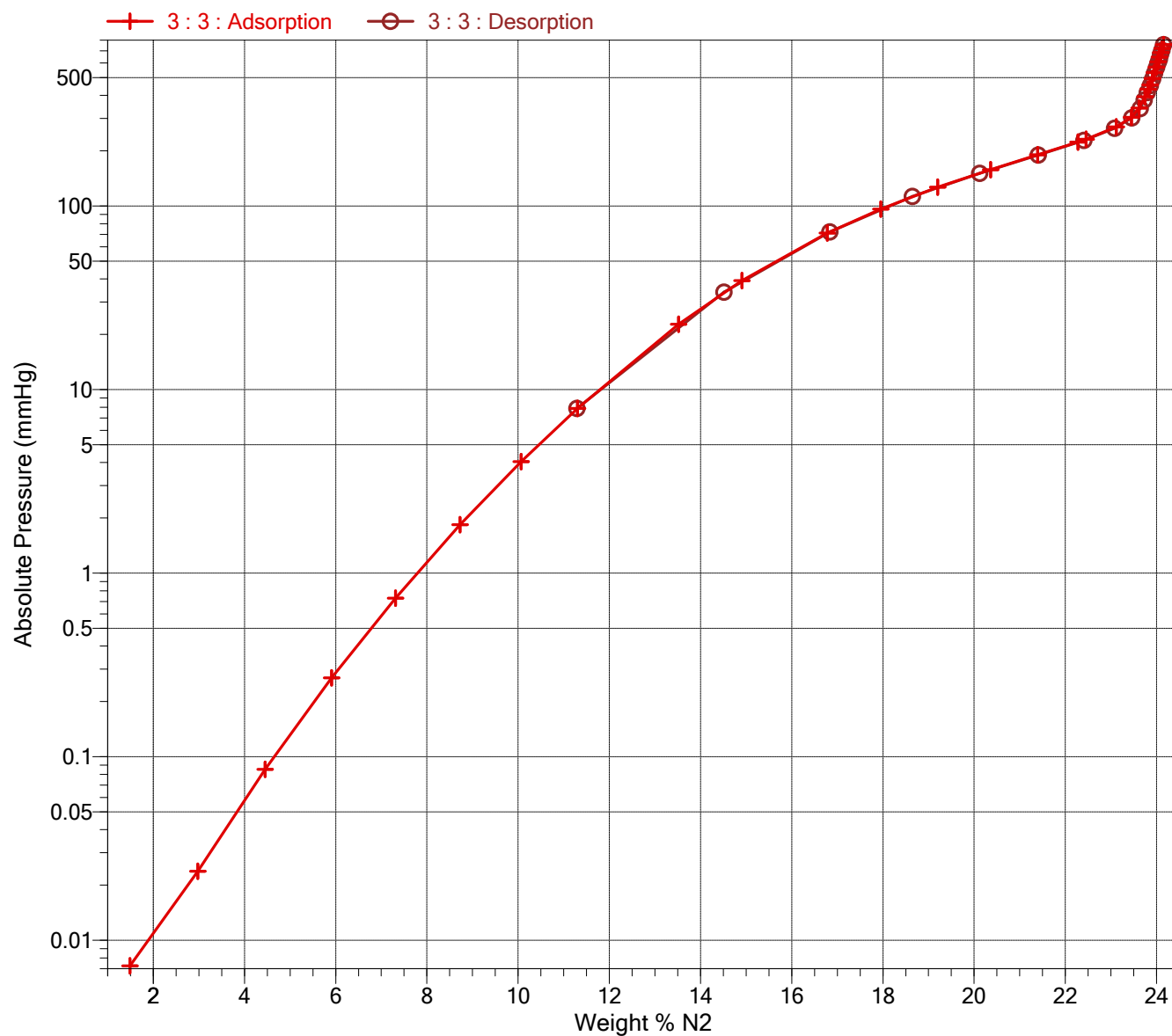
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Isotherm Pressure Composition



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Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

BET Report

BET surface area: 564.9856 ± 8.5478 m²/g
Slope: 0.007661 ± 0.000115 g/cm³ STP
Y-intercept: 0.000043 ± 0.000021 g/cm³ STP
C: 178.012469
Qm: 129.8048 cm³/g STP
Correlation coefficient: 0.9994414
Molecular cross-sectional area: 0.1620 nm²

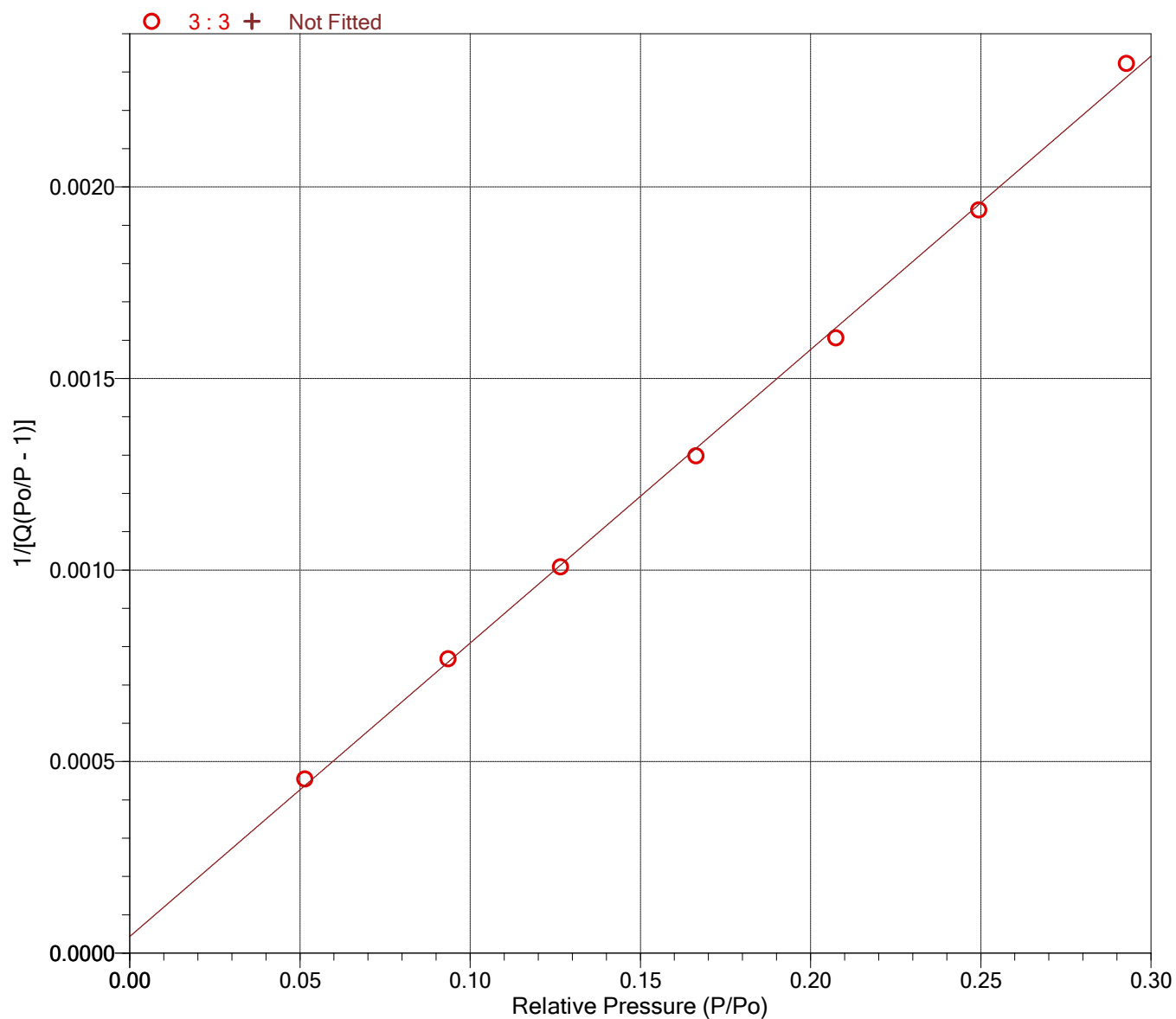
Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	1/[Q(Po/P - 1)]
0.051443133	119.3015	0.000455
0.093514660	134.2817	0.000768
0.126526362	143.6408	0.001008
0.166340920	153.6487	0.001299
0.207394457	162.9293	0.001606
0.249378221	171.2076	0.001941
0.292748263	178.2364	0.002322

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Thermal correction: No
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BET Surface Area Plot



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Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Langmuir Report

Langmuir surface area: 853.8369 ± 6.3583 m²/g
Slope: 0.005098 ± 0.000038 g/cm³ STP
Y-intercept: 0.074 ± 0.014 g/cm³ STP·mmHg
b: 0.068920 1/mmHg
Qm: 196.1681 cm³/g STP
Correlation coefficient: 0.999197
Molecular cross-sectional area: 0.1620 nm²

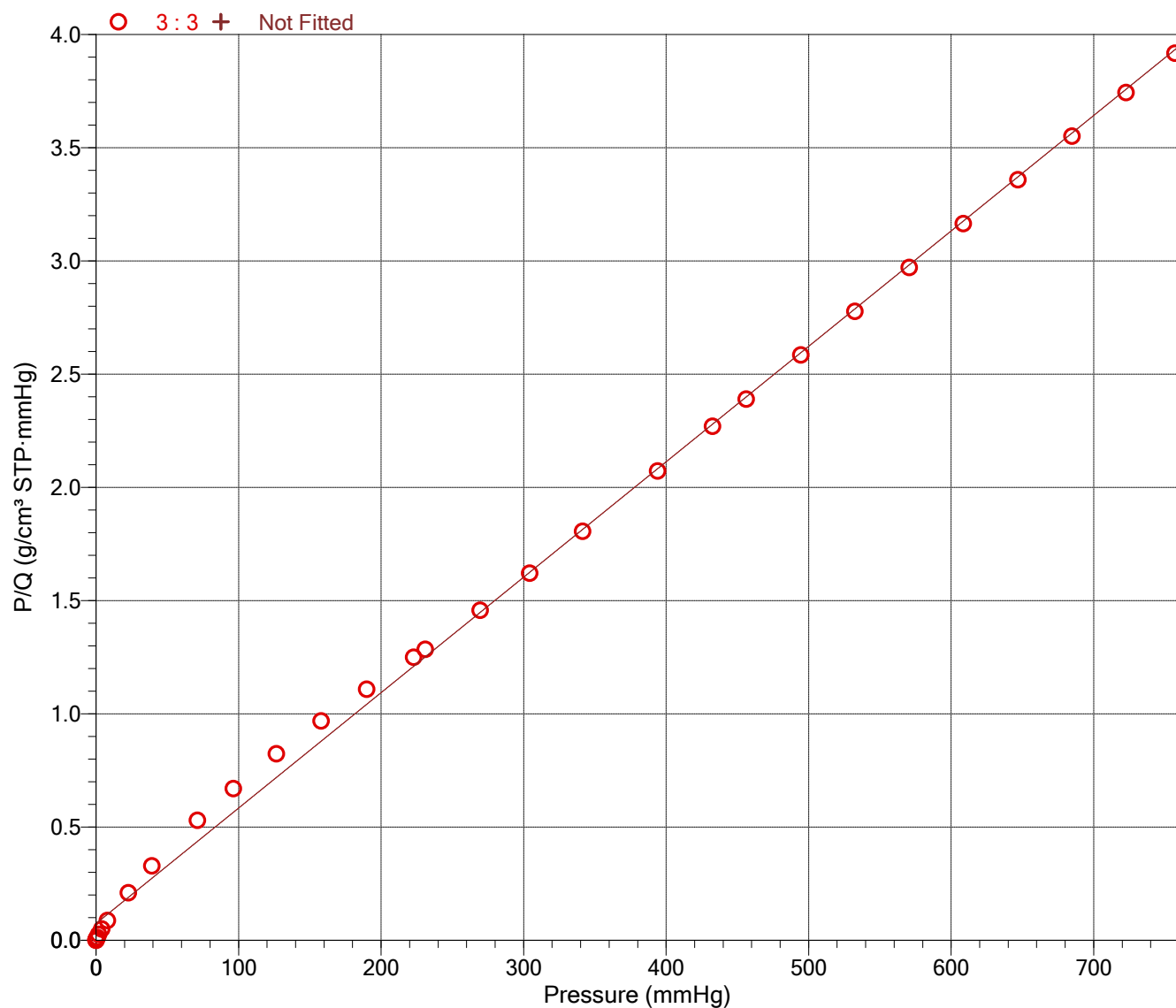
Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	P/Q (g/cm ³ STP ·mmHg)
0.007248	11.9163	0.001
0.023767	23.8343	0.001
0.085284	35.6123	0.002
0.269154	47.2740	0.006
0.731078	58.5160	0.012
1.834254	69.8457	0.026
4.054148	80.5747	0.050
7.885444	90.4213	0.087
22.705696	108.1951	0.210
39.146824	119.3015	0.328
71.153618	134.2817	0.530
96.273193	143.6408	0.670
126.554810	153.6487	0.824
157.804840	162.9293	0.969
189.758972	171.2076	1.108
222.788879	178.2364	1.250
230.969696	179.6804	1.285
269.538483	184.9862	1.457
304.151062	187.6291	1.621
341.279633	188.9984	1.806
393.905731	190.0317	2.073
432.541595	190.5729	2.270
456.152832	190.8936	2.390
494.549194	191.2976	2.585
532.453125	191.6675	2.778
570.515991	192.0051	2.971
608.513855	192.2982	3.164
646.714111	192.5581	3.359
684.766663	192.7918	3.552
722.745972	193.0376	3.744
757.049866	193.2624	3.917

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Langmuir Surface Area Plot



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Freundlich Tabular Report

Qm·C: 53.7133 ± 0.7571 cm³/g STP
m: 4.7329 ± 0.1441
Correlation coefficient: 0.986830

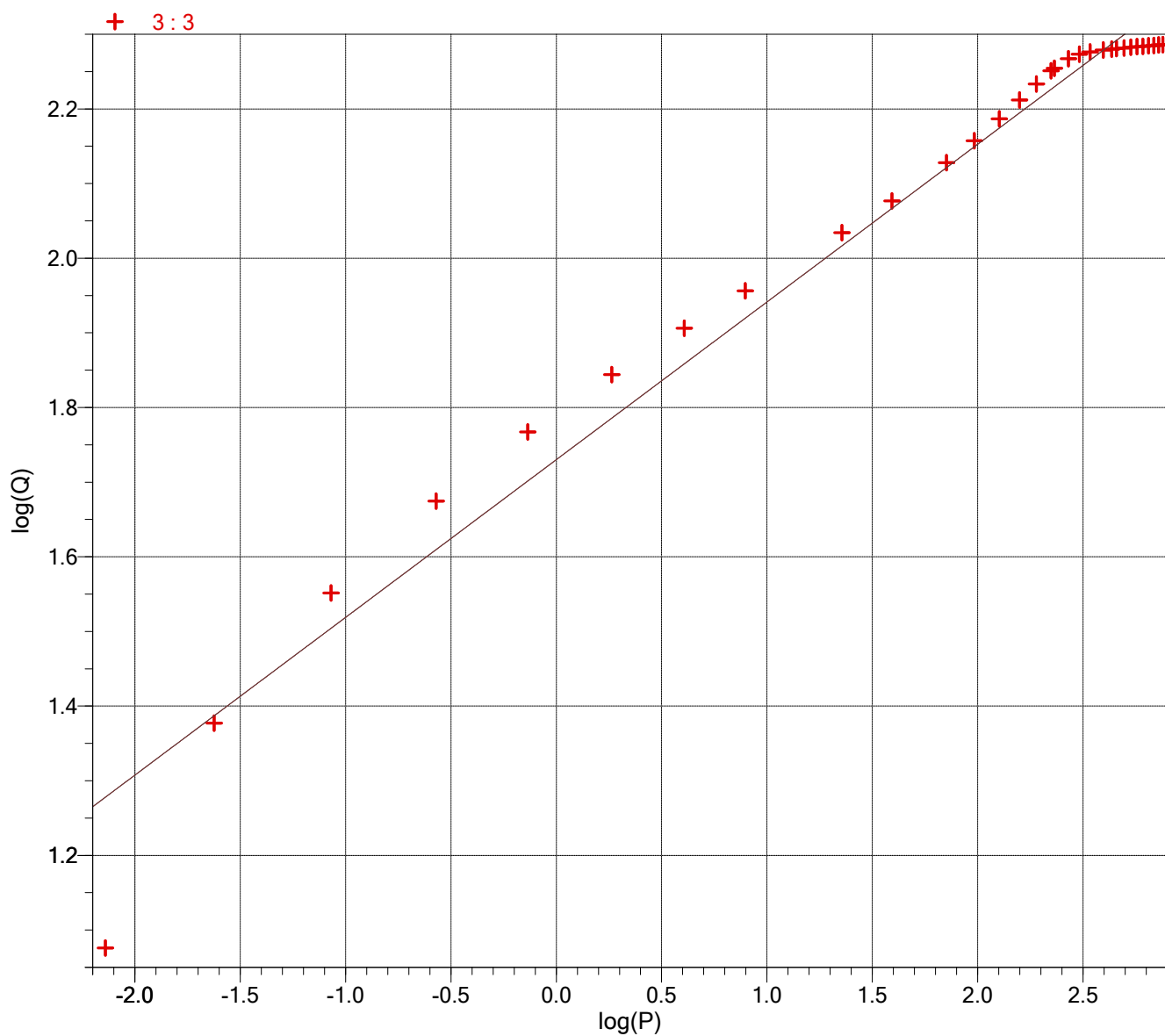
Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	log(P)	log(Q)
0.007248	11.9163	-2.13980	1.0761
0.023767	23.8343	-1.62403	1.3772
0.085284	35.6123	-1.06913	1.5516
0.269154	47.2740	-0.57000	1.6746
0.731078	58.5160	-0.13604	1.7673
1.834254	69.8457	0.26346	1.8441
4.054148	80.5747	0.60790	1.9062
7.885444	90.4213	0.89683	1.9563
22.705696	108.1951	1.35613	2.0342
39.146824	119.3015	1.59270	2.0766
71.153618	134.2817	1.85220	2.1280
96.273193	143.6408	1.98351	2.1573
126.554810	153.6487	2.10228	2.1865
157.804840	162.9293	2.19812	2.2120
189.758972	171.2076	2.27820	2.2335
222.788879	178.2364	2.34789	2.2510
230.969696	179.6804	2.36356	2.2545
269.538483	184.9862	2.43062	2.2671
304.151062	187.6291	2.48309	2.2733
341.279633	188.9984	2.53311	2.2765
393.905731	190.0317	2.59539	2.2788
432.541595	190.5729	2.63603	2.2801
456.152832	190.8936	2.65911	2.2808
494.549194	191.2976	2.69421	2.2817
532.453125	191.6675	2.72628	2.2825
570.515991	192.0051	2.75627	2.2833
608.513855	192.2982	2.78427	2.2840
646.714111	192.5581	2.81071	2.2846
684.766663	192.7918	2.83554	2.2851
722.745972	193.0376	2.85899	2.2856
757.049866	193.2624	2.87912	2.2861

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Freundlich Plot



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Sample density: 1.000 g/cm³

Temkin Tabular Report

$q\text{-}\alpha/Q_m$: 0.035906 \pm 0.001340 kJ/mol·(cm³/g STP)

A: 62.9426 \pm 15.3331 mmHg

Correlation coefficient: 0.980405

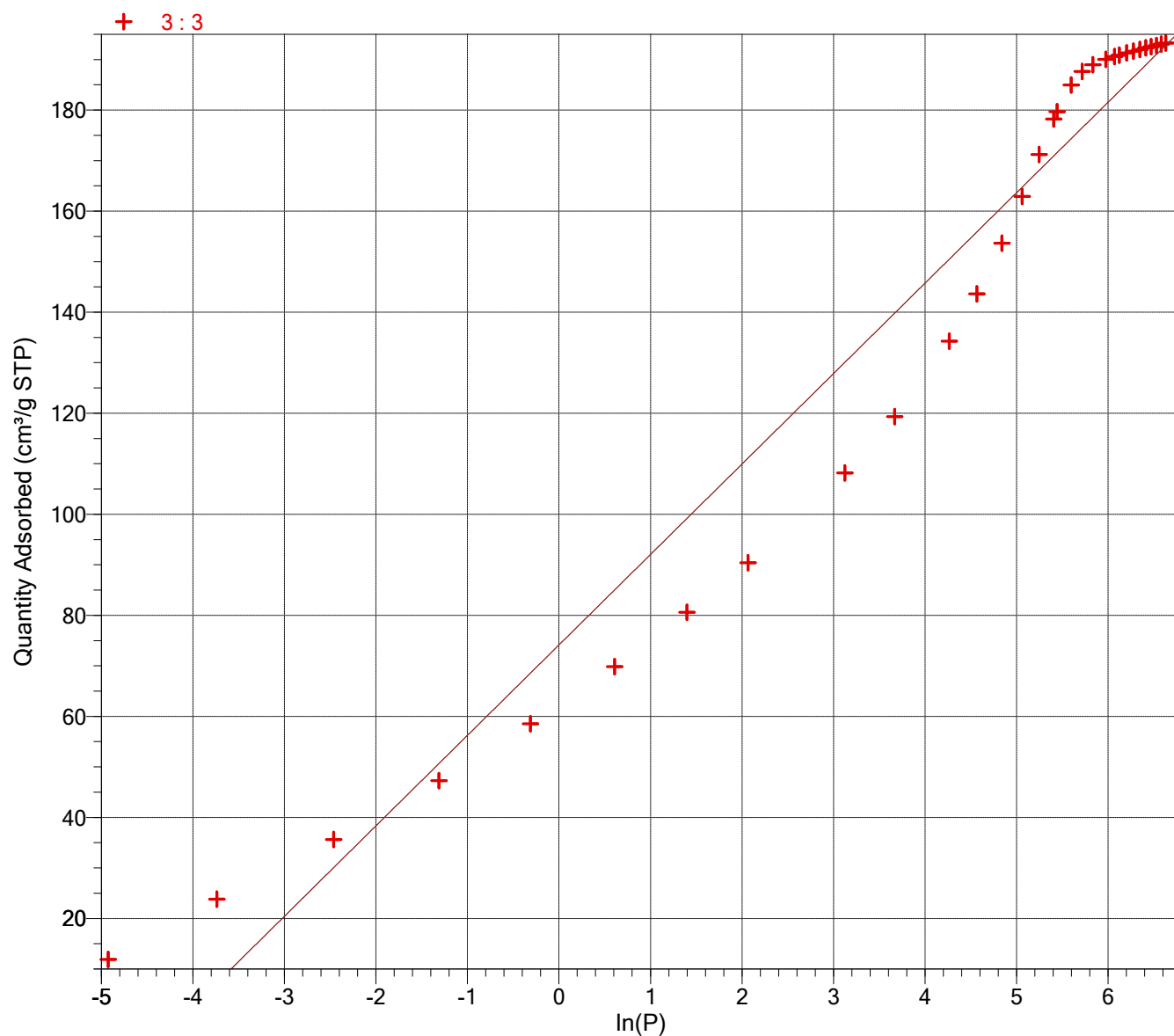
Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	ln(P)
0.007248	11.9163	-4.92707
0.023767	23.8343	-3.73946
0.085284	35.6123	-2.46177
0.269154	47.2740	-1.31247
0.731078	58.5160	-0.31324
1.834254	69.8457	0.60664
4.054148	80.5747	1.39974
7.885444	90.4213	2.06502
22.705696	108.1951	3.12262
39.146824	119.3015	3.66732
71.153618	134.2817	4.26484
96.273193	143.6408	4.56719
126.554810	153.6487	4.84068
157.804840	162.9293	5.06136
189.758972	171.2076	5.24575
222.788879	178.2364	5.40622
230.969696	179.6804	5.44229
269.538483	184.9862	5.59671
304.151062	187.6291	5.71752
341.279633	188.9984	5.83270
393.905731	190.0317	5.97611
432.541595	190.5729	6.06968
456.152832	190.8936	6.12283
494.549194	191.2976	6.20365
532.453125	191.6675	6.27749
570.515991	192.0051	6.34654
608.513855	192.2982	6.41102
646.714111	192.5581	6.47190
684.766663	192.7918	6.52908
722.745972	193.0376	6.58306
757.049866	193.2624	6.62943

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:00
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Temkin Plot



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:00
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

t-Plot Report

Micropore volume: 0.023399 cm³/g
Micropore area: 51.8445 m²/g
External surface area: 513.1411 m²/g
Slope: 331.743672 ± 11.659981 cm³/g·nm STP
Y-intercept: 15.127176 ± 5.026349 cm³/g STP
Correlation coefficient: 0.997538
Surface area correction factor: 1.000
Density conversion factor: 0.0015468
Total surface area (BET): 564.9856 m²/g
Thickness range: 0.35000 to 0.50000 nm
Thickness equation: Harkins and Jura

Thickness Curve

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

t-Plot Report - Data

Relative Pressure (P/P _o)	Statistical Thickness (nm)	Quantity Adsorbed (cm ³ /g STP)	Fitted
0.051443133	0.32522	119.3015	
0.093514660	0.36276	134.2817	*
0.126526362	0.38747	143.6408	*
0.166340920	0.41482	153.6487	*
0.207394457	0.44166	162.9293	*
0.249378221	0.46859	171.2076	*
0.292748263	0.49651	178.2364	*
0.303513230	0.50351	179.6804	
0.354221735	0.53723	184.9862	
0.399682818	0.56888	187.6291	
0.448501203	0.60498	188.9984	
0.517624618	0.66122	190.0317	
0.568444661	0.70772	190.5729	
0.599454175	0.73889	190.8936	
0.649864304	0.79531	191.2976	
0.699682550	0.86013	191.6675	

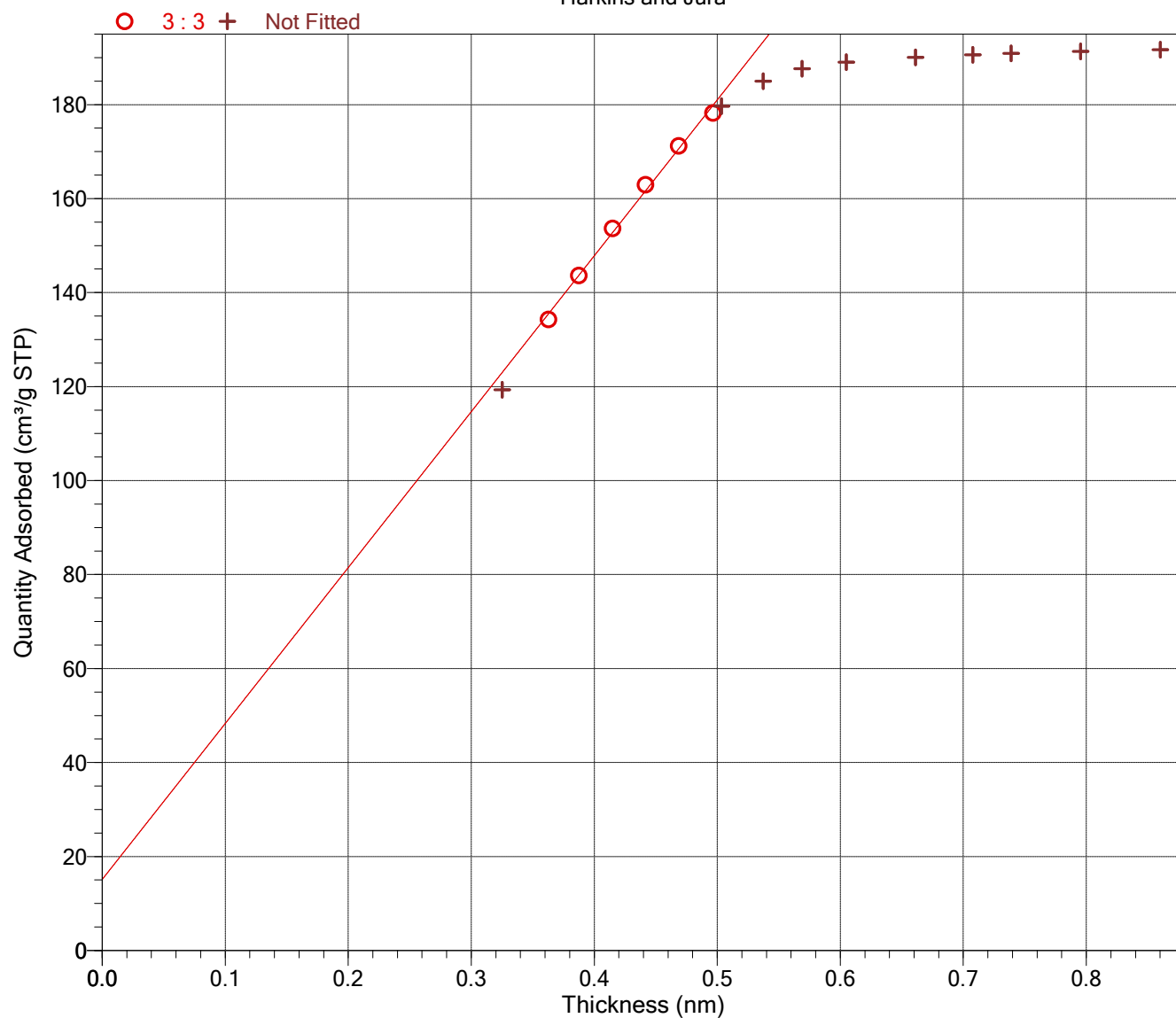
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

t-Plot

Harkins and Jura



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Alpha-S Method

Primary Data

4029- At least two fitted data points are needed for Alpha-S calculations.

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

f-Ratio Method

Primary Data
A reference file has not been chosen.

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Adsorption Pore Distribution Report

Faas Correction

Harkins and Jura

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

Width range: 1.7000 to 300.0000 nm

Adsorbate property factor: 0.95300 nm

Density conversion factor: 0.0015468

Fraction of pores open at both ends: 0.00

Pore Width Range (nm)	Average Width (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Area (m ² /g)	Cumulative Pore Area (m ² /g)
372.1 - 40.1	43.4	0.000404	0.000404	0.037	0.037
40.1 - 20.7	24.5	0.000467	0.000871	0.076	0.114
20.7 - 14.0	16.0	0.000470	0.001341	0.117	0.231
14.0 - 10.6	11.8	0.000554	0.001895	0.188	0.419
10.6 - 8.5	9.3	0.000657	0.002552	0.283	0.702
8.5 - 7.1	7.6	0.000793	0.003346	0.416	1.118
7.1 - 6.0	6.4	0.000903	0.004248	0.561	1.679
6.0 - 5.2	5.5	0.001018	0.005266	0.735	2.414
5.2 - 4.8	5.0	0.000851	0.006117	0.684	3.098
4.8 - 4.2	4.5	0.001461	0.007578	1.310	4.408
4.2 - 3.6	3.8	0.002993	0.010571	3.116	7.523
3.6 - 3.2	3.4	0.004351	0.014922	5.153	12.676
3.2 - 2.9	3.0	0.009061	0.023983	11.902	24.577
2.9 - 2.6	2.7	0.019076	0.043059	27.870	52.447
2.6 - 2.5	2.6	0.005265	0.048325	8.182	60.629
2.5 - 2.3	2.4	0.026003	0.074328	43.101	103.730
2.3 - 2.1	2.2	0.030765	0.105093	56.207	159.937
2.1 - 1.9	2.0	0.034142	0.139235	68.945	228.882
1.9 - 1.7	1.8	0.035673	0.174908	80.103	308.986

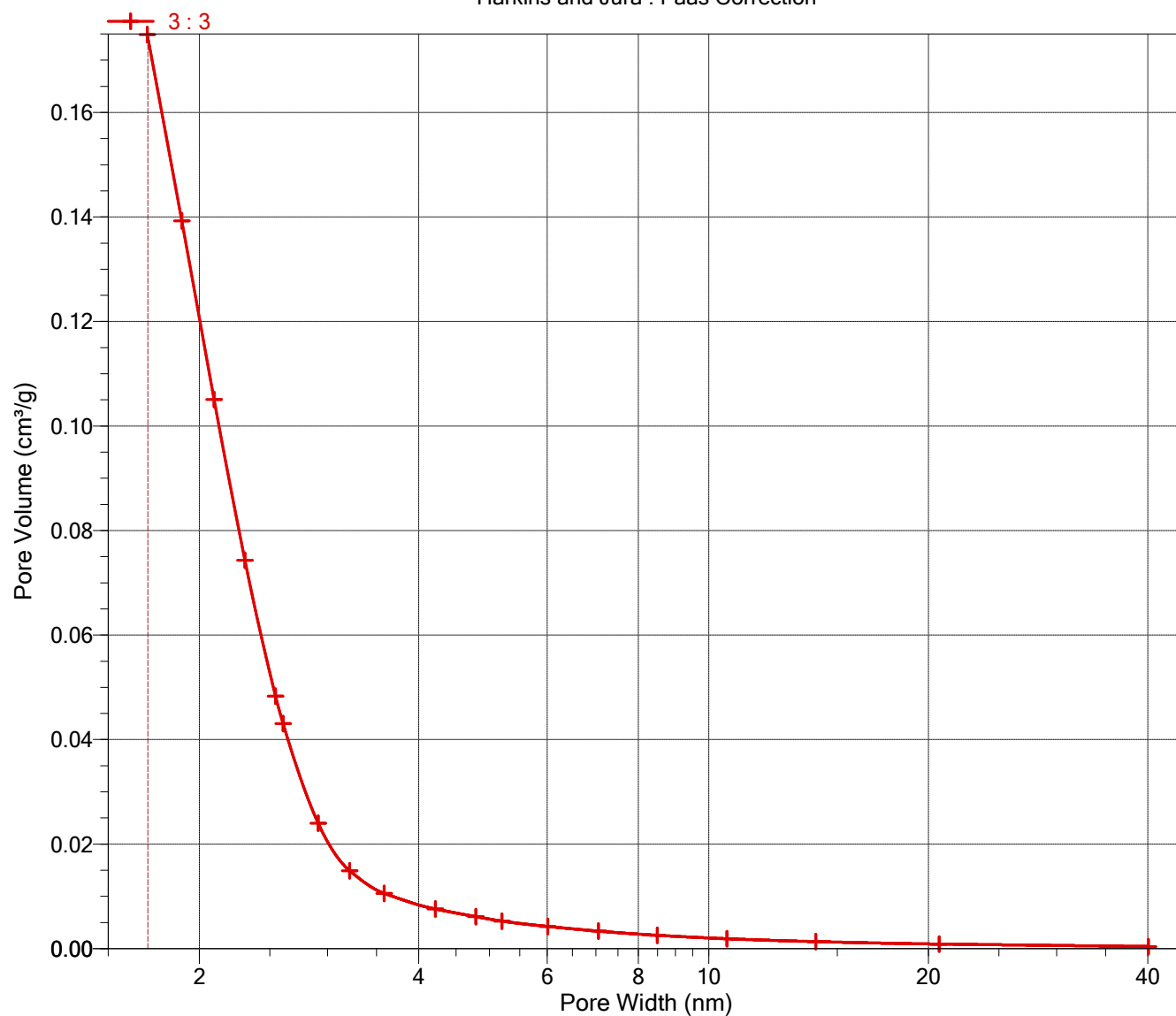
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Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Adsorption Cumulative Pore Volume (Larger)

Harkins and Jura : Faas Correction



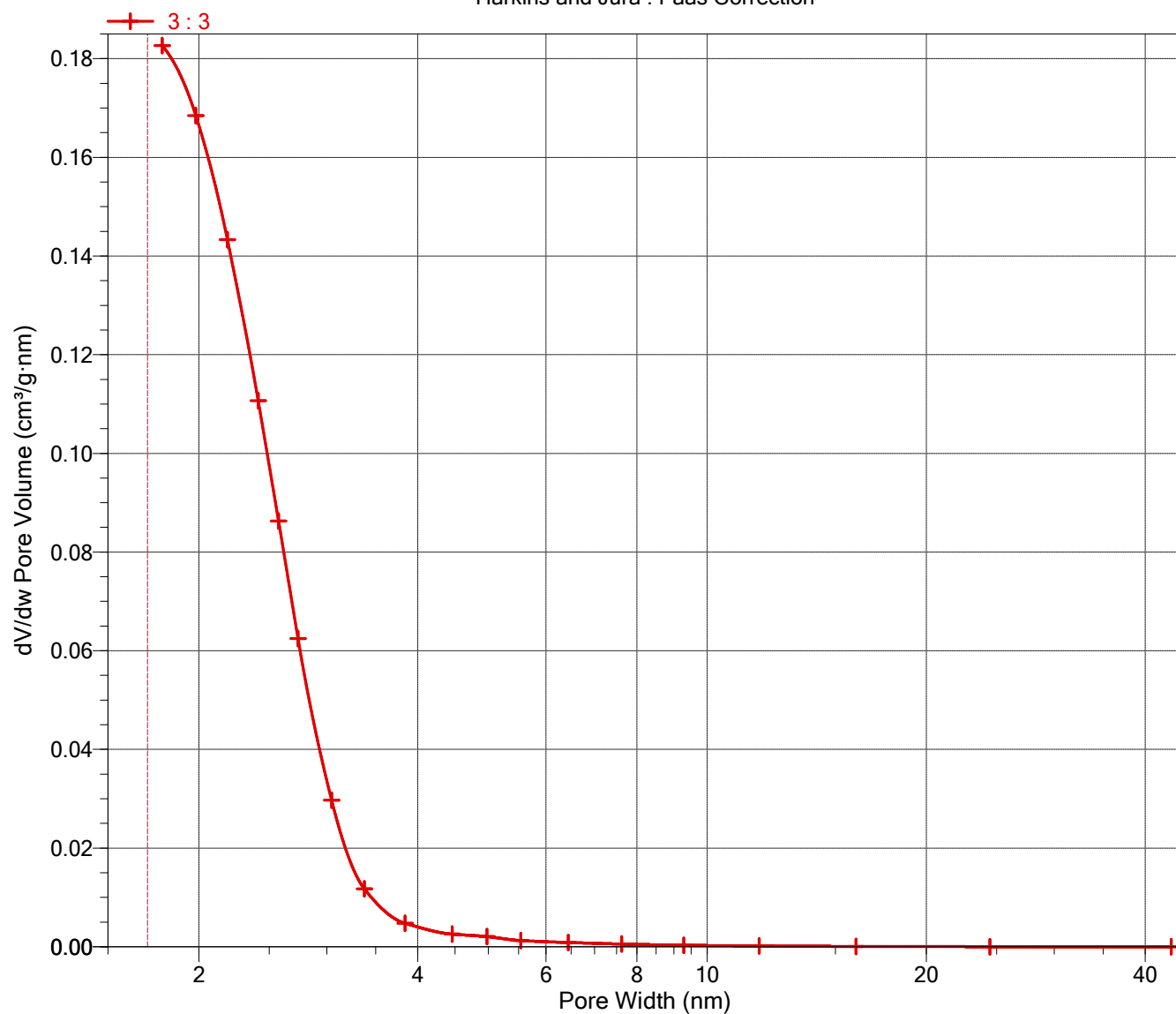
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Adsorption dV/dw Pore Volume

Harkins and Jura : Faas Correction



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Desorption Pore Distribution Report

Faas Correction

Harkins and Jura

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

Width range: 1.7000 to 300.0000 nm

Adsorbate property factor: 0.95300 nm

Density conversion factor: 0.0015468

Fraction of pores open at both ends: 0.00

Pore Width Range (nm)	Average Width (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Area (m ² /g)	Cumulative Pore Area (m ² /g)
372.1 - 28.0	29.6	0.000519	0.000519	0.070	0.070
28.0 - 17.0	19.7	0.000457	0.000976	0.093	0.163
17.0 - 12.2	13.7	0.000483	0.001459	0.141	0.304
12.2 - 10.4	11.1	0.000378	0.001838	0.136	0.440
10.4 - 8.3	9.1	0.000662	0.002500	0.291	0.730
8.3 - 7.0	7.5	0.000758	0.003258	0.404	1.134
7.0 - 5.9	6.4	0.000920	0.004178	0.579	1.713
5.9 - 5.1	5.5	0.001056	0.005234	0.771	2.485
5.1 - 4.5	4.8	0.001334	0.006568	1.116	3.600
4.5 - 4.0	4.2	0.001588	0.008155	1.505	5.105
4.0 - 3.6	3.8	0.001968	0.010123	2.099	7.204
3.6 - 3.2	3.4	0.004729	0.014852	5.637	12.841
3.2 - 2.9	3.0	0.010429	0.025281	13.849	26.690
2.9 - 2.6	2.7	0.019375	0.044657	28.650	55.340
2.6 - 2.3	2.4	0.029782	0.074439	49.152	104.492
2.3 - 2.0	2.2	0.038372	0.112811	71.102	175.594
2.0 - 1.8	1.9	0.043263	0.156074	90.777	266.371

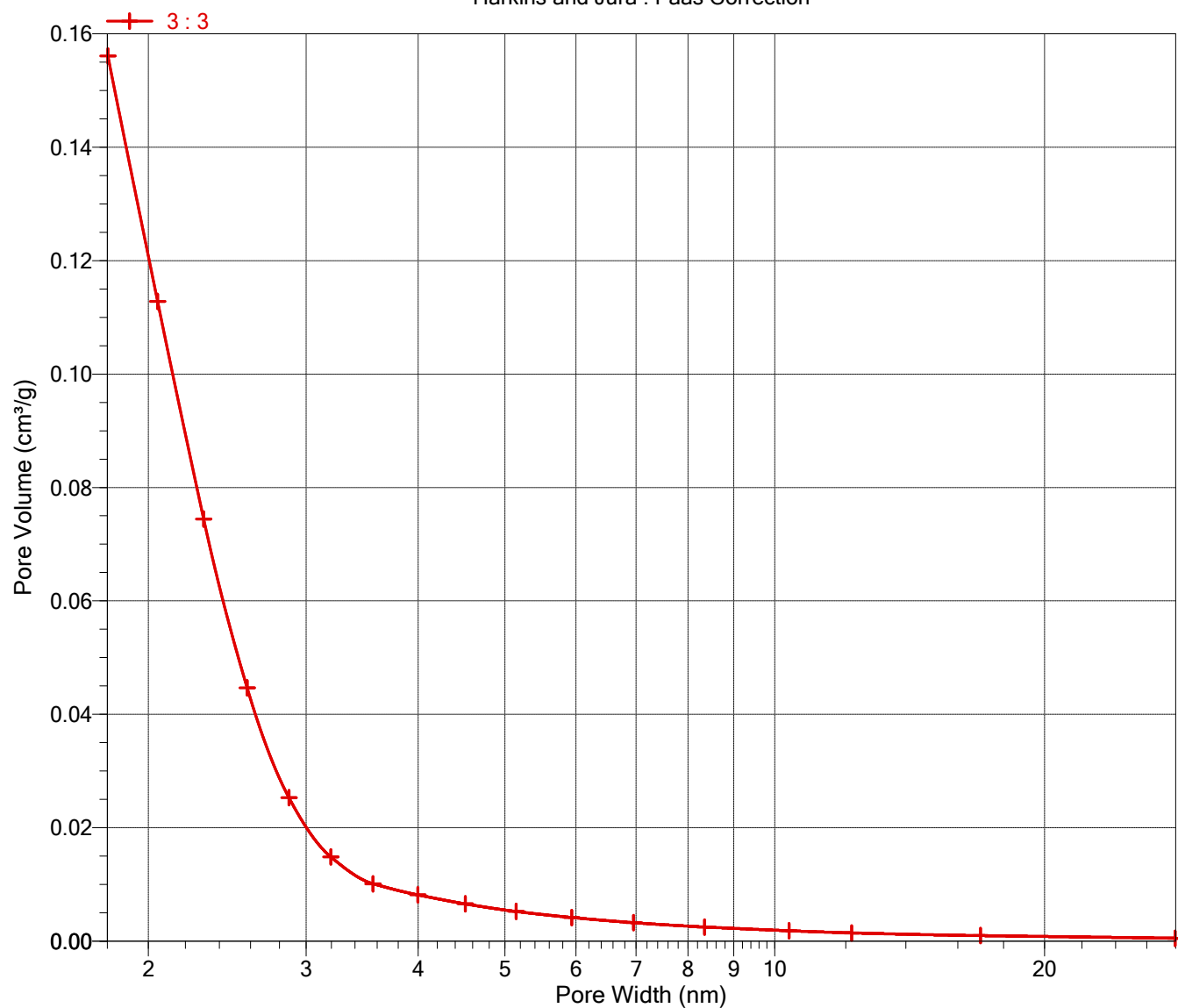
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Desorption Cumulative Pore Volume (Larger)

Harkins and Jura : Faas Correction



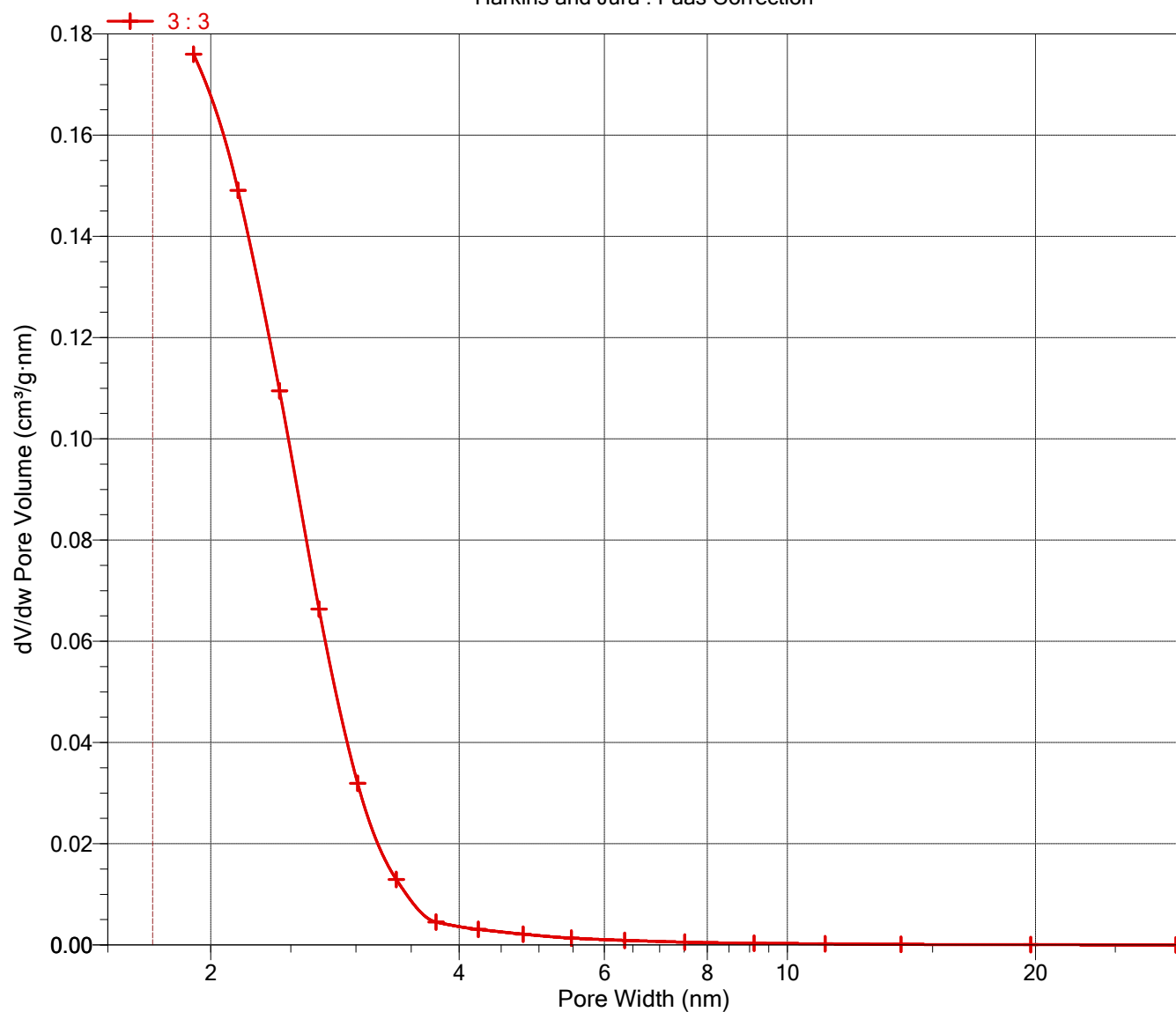
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Desorption dV/dw Pore Volume

Harkins and Jura : Faas Correction



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Adsorption Pore Distribution Report

Harkins and Jura

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

Width range: 1.7000 to 300.0000 nm
Adsorbate property factor: 0.95300 nm
Density conversion factor: 0.0015468

Pore Width Range (nm)	Average Width (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Area (m ² /g)	Cumulative Pore Area (m ² /g)
372.1 - 40.1	206.1	0.000357	0.000357	0.007	0.007
40.1 - 20.7	30.4	0.000446	0.000803	0.059	0.066
20.7 - 14.0	17.4	0.000457	0.001260	0.105	0.171
14.0 - 10.6	12.3	0.000540	0.001801	0.176	0.347
10.6 - 8.5	9.5	0.000642	0.002442	0.269	0.616
8.5 - 7.1	7.8	0.000774	0.003216	0.398	1.014
7.1 - 6.0	6.5	0.000881	0.004097	0.539	1.553
6.0 - 5.2	5.6	0.000993	0.005090	0.708	2.261
5.2 - 4.8	5.0	0.000841	0.005931	0.673	2.934
4.8 - 4.2	4.5	0.001419	0.007350	1.261	4.195
4.2 - 3.6	3.9	0.002850	0.010201	2.922	7.117
3.6 - 3.2	3.4	0.004208	0.014409	4.948	12.065
3.2 - 2.9	3.1	0.008754	0.023162	11.430	23.495
2.9 - 2.6	2.8	0.018264	0.041426	26.485	49.981
2.6 - 2.5	2.6	0.005245	0.046671	8.148	58.128
2.5 - 2.3	2.4	0.024989	0.071660	41.183	99.311
2.3 - 2.1	2.2	0.029514	0.101173	53.606	152.917
2.1 - 1.9	2.0	0.032647	0.133820	65.504	218.421
1.9 - 1.7	1.8	0.033964	0.167784	75.703	294.124

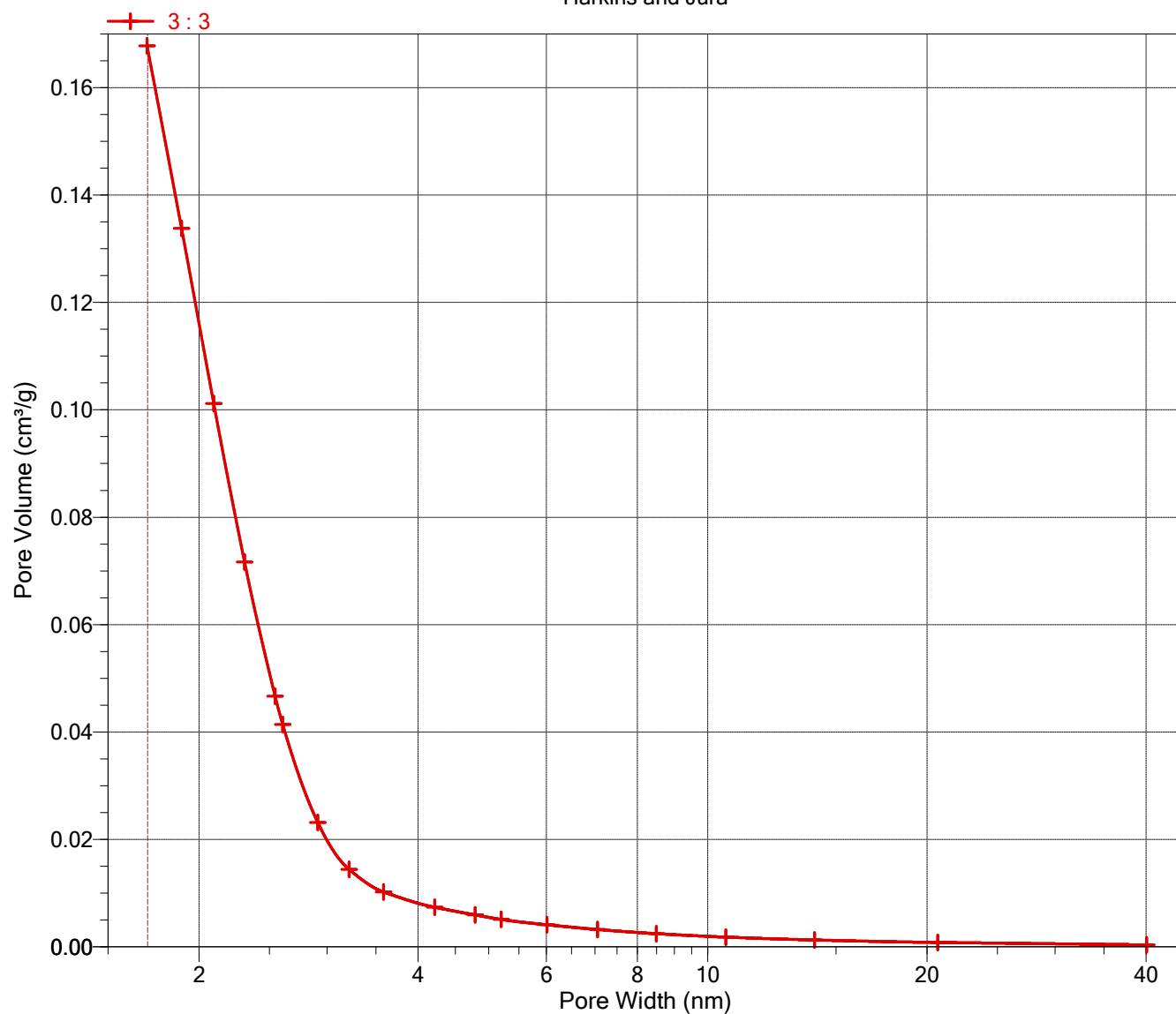
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Adsorption Cumulative Pore Volume (Larger)

Harkins and Jura



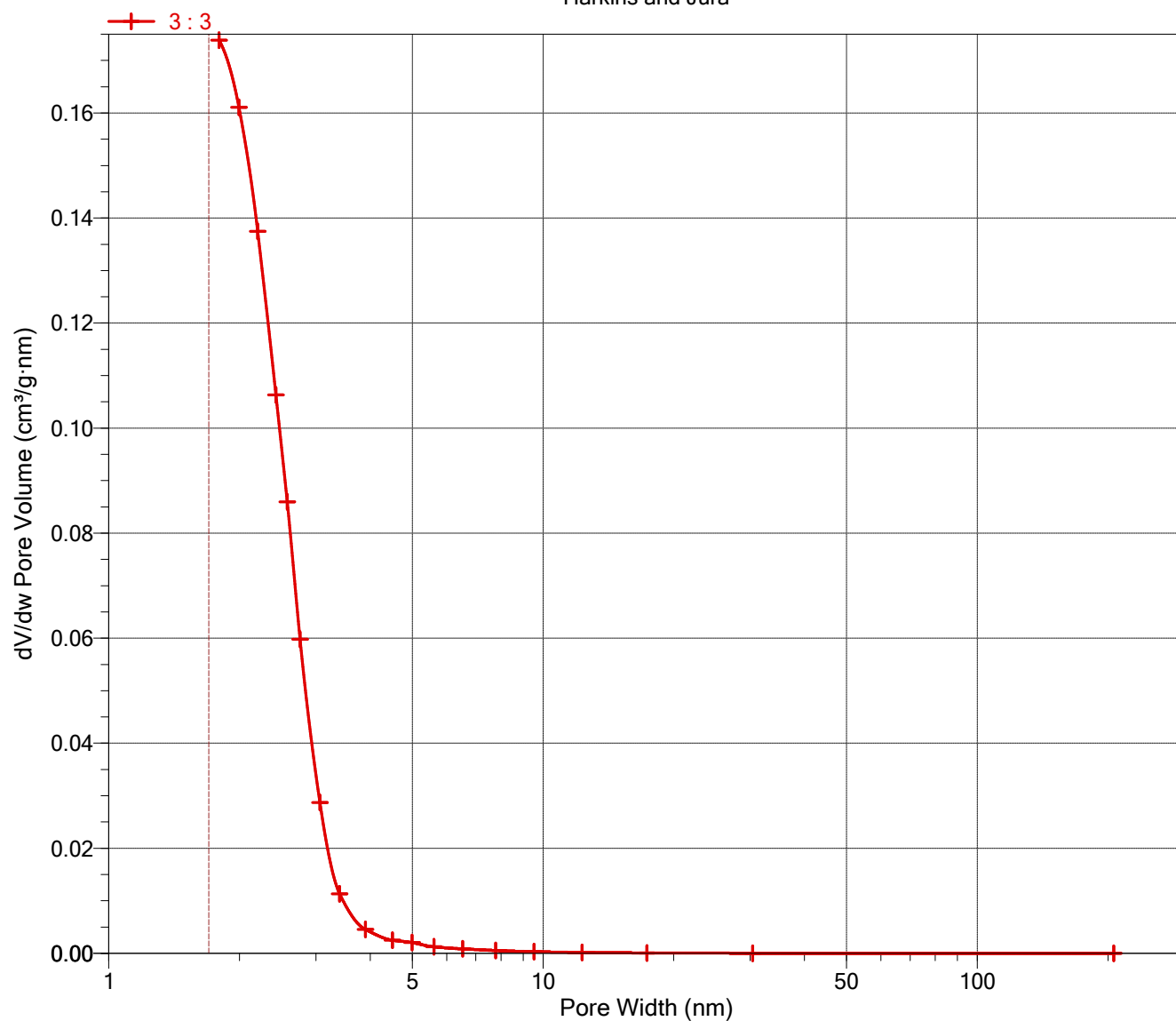
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Adsorption dV/dw Pore Volume

Harkins and Jura



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Desorption Pore Distribution Report

Harkins and Jura

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

Width range: 1.7000 to 300.0000 nm
Adsorbate property factor: 0.95300 nm
Density conversion factor: 0.0015468

Pore Width Range (nm)	Average Width (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Area (m ² /g)	Cumulative Pore Area (m ² /g)
372.1 - 28.0	200.0	0.000433	0.000433	0.009	0.009
28.0 - 17.0	22.5	0.000446	0.000879	0.079	0.088
17.0 - 12.2	14.6	0.000475	0.001355	0.130	0.219
12.2 - 10.4	11.3	0.000378	0.001733	0.134	0.353
10.4 - 8.3	9.4	0.000649	0.002381	0.277	0.630
8.3 - 7.0	7.7	0.000741	0.003123	0.388	1.017
7.0 - 5.9	6.4	0.000899	0.004021	0.558	1.575
5.9 - 5.1	5.5	0.001030	0.005052	0.744	2.319
5.1 - 4.5	4.8	0.001300	0.006351	1.076	3.396
4.5 - 4.0	4.3	0.001545	0.007896	1.451	4.847
4.0 - 3.6	3.8	0.001911	0.009806	2.022	6.869
3.6 - 3.2	3.4	0.004570	0.014376	5.409	12.278
3.2 - 2.9	3.0	0.010032	0.024408	13.229	25.507
2.9 - 2.6	2.7	0.018576	0.042984	27.277	52.784
2.6 - 2.3	2.4	0.028410	0.071394	46.535	99.319
2.3 - 2.0	2.2	0.036387	0.107781	66.846	166.165
2.0 - 1.8	1.9	0.040746	0.148527	84.634	250.799

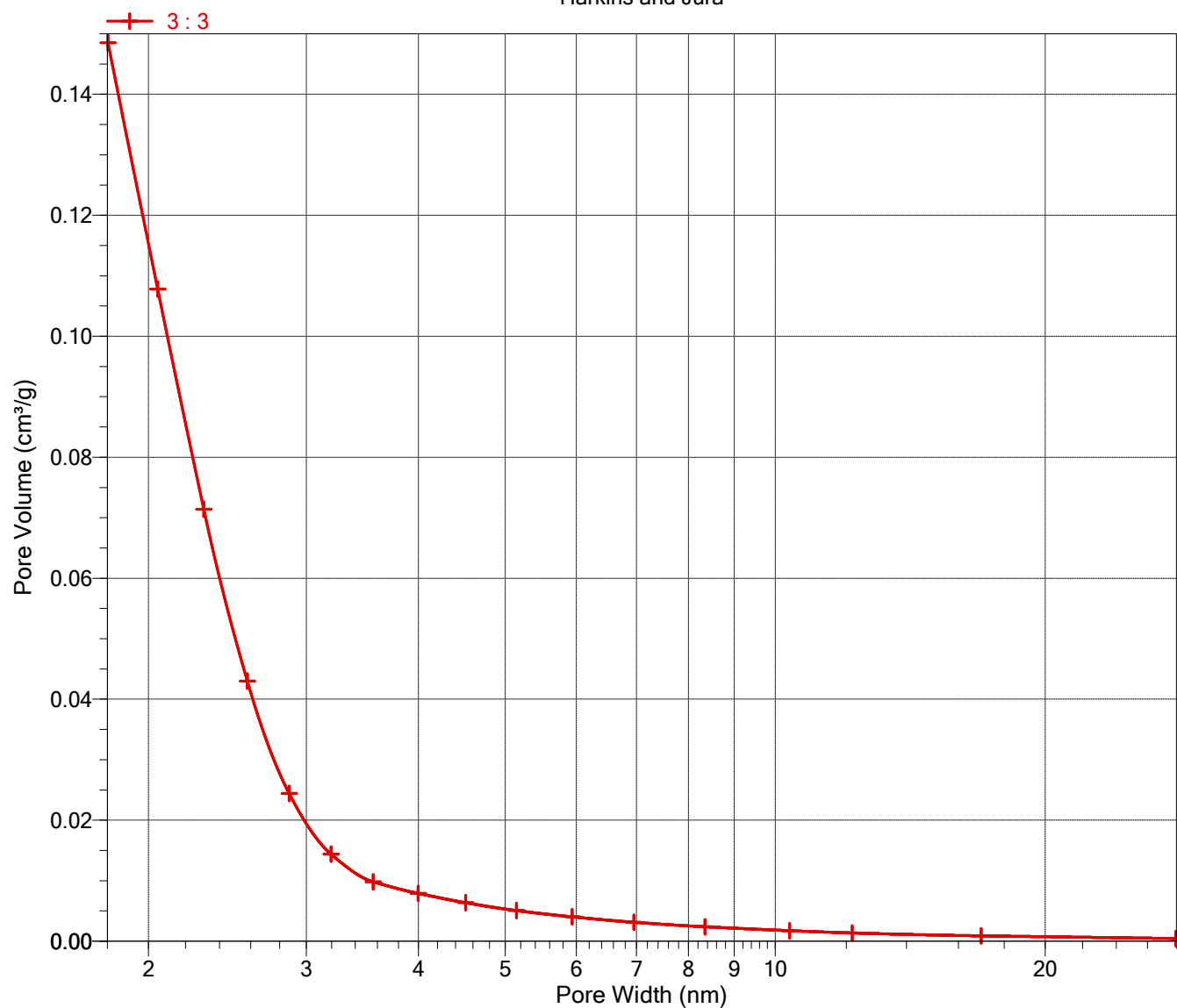
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Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Desorption Cumulative Pore Volume (Larger)

Harkins and Jura



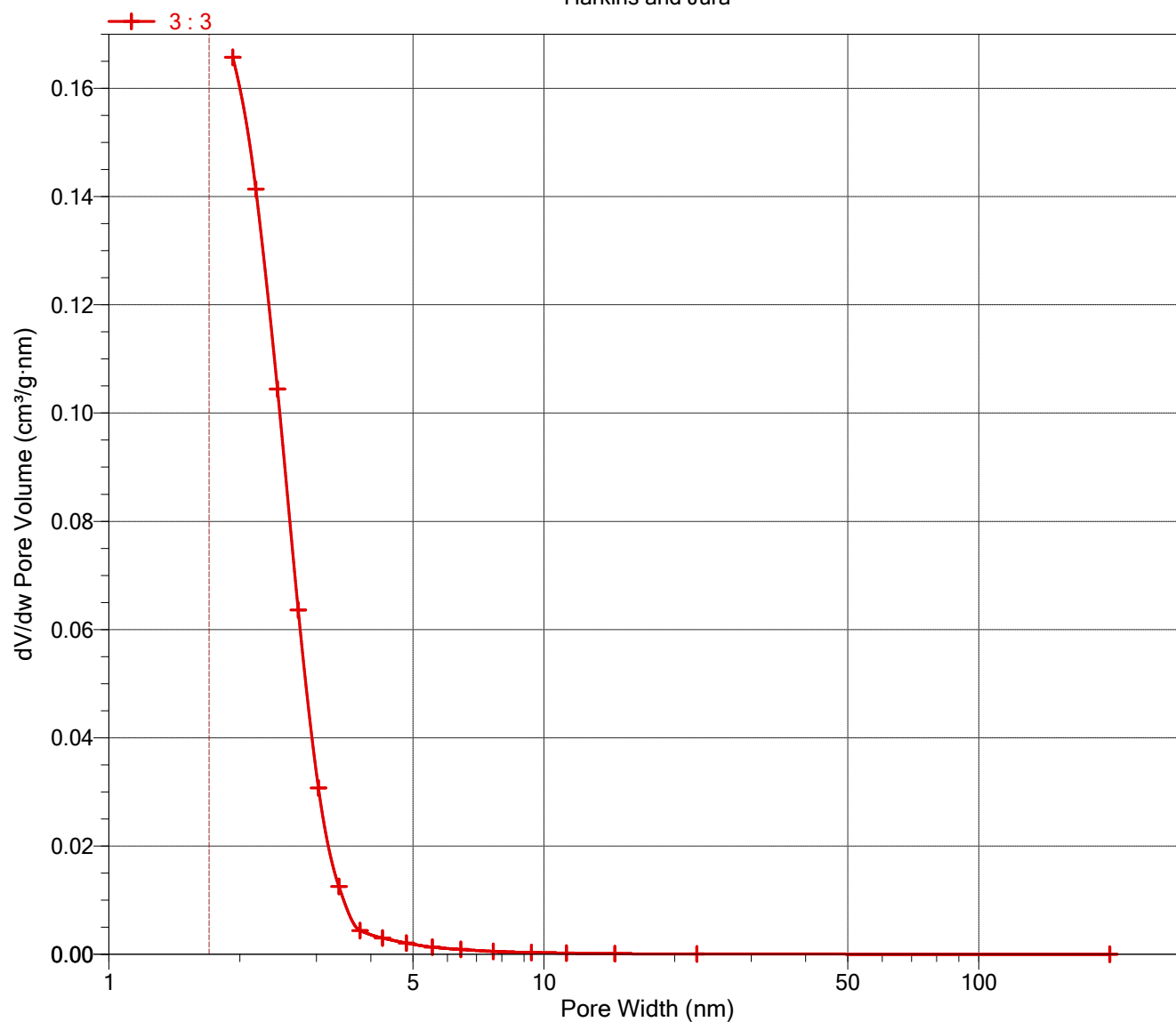
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Desorption dV/dw Pore Volume

Harkins and Jura



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Horvath-Kawazoe Report

Slit Pore Geometry (Original H-K)

Maximum pore volume: 0.237664 cm³/g

at Relative Pressure: 0.166340920

Median pore width: 0.6813 nm

Relative pressure range: 1e-09 to 0.18

Diameter of adsorptive molecule: 0.3000 nm

Diameter of adsorptive at zero interaction energy: 0.2574 nm

Adsorptive density: 6.710e+14 molecules/cm²

Adsorptive dispersion constant: 7.777e-59

Diameter of sample atom: 0.3400 nm

Diameter of sample atom at zero interaction energy: 0.2918 nm

Sample Density: 3.845e+15 molecules/cm²

Sample dispersion constant: 6.036e-59

Density conversion factor: 0.0015468

Absolute Pressure (mmHg)	Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	Pore Width (nm)	Cumulative Pore Volume (cm ³ /g)	Differential Pore Volume (cm ³ /g·nm)
0.00725	0.000009526	11.91625	0.407	0.0184	0.0453
0.02377	0.000031240	23.83430	0.440	0.0369	0.5586
0.08528	0.000111980	35.61228	0.482	0.0551	0.4344
0.26915	0.000353382	47.27402	0.528	0.0731	0.3879
0.73108	0.000960129	58.51602	0.579	0.0905	0.3430
1.83425	0.002409210	69.84566	0.638	0.1080	0.2953
4.05415	0.005326624	80.57465	0.704	0.1246	0.2514
7.88544	0.010362489	90.42135	0.776	0.1399	0.2133
22.70570	0.029839910	108.19505	0.940	0.1674	0.1667
39.14682	0.051443133	119.30153	1.068	0.1845	0.1342
71.15362	0.093514660	134.28172	1.274	0.2077	0.1127
96.27319	0.126526362	143.64079	1.422	0.2222	0.0976
126.55481	0.166340920	153.64870	1.598	0.2377	0.0879

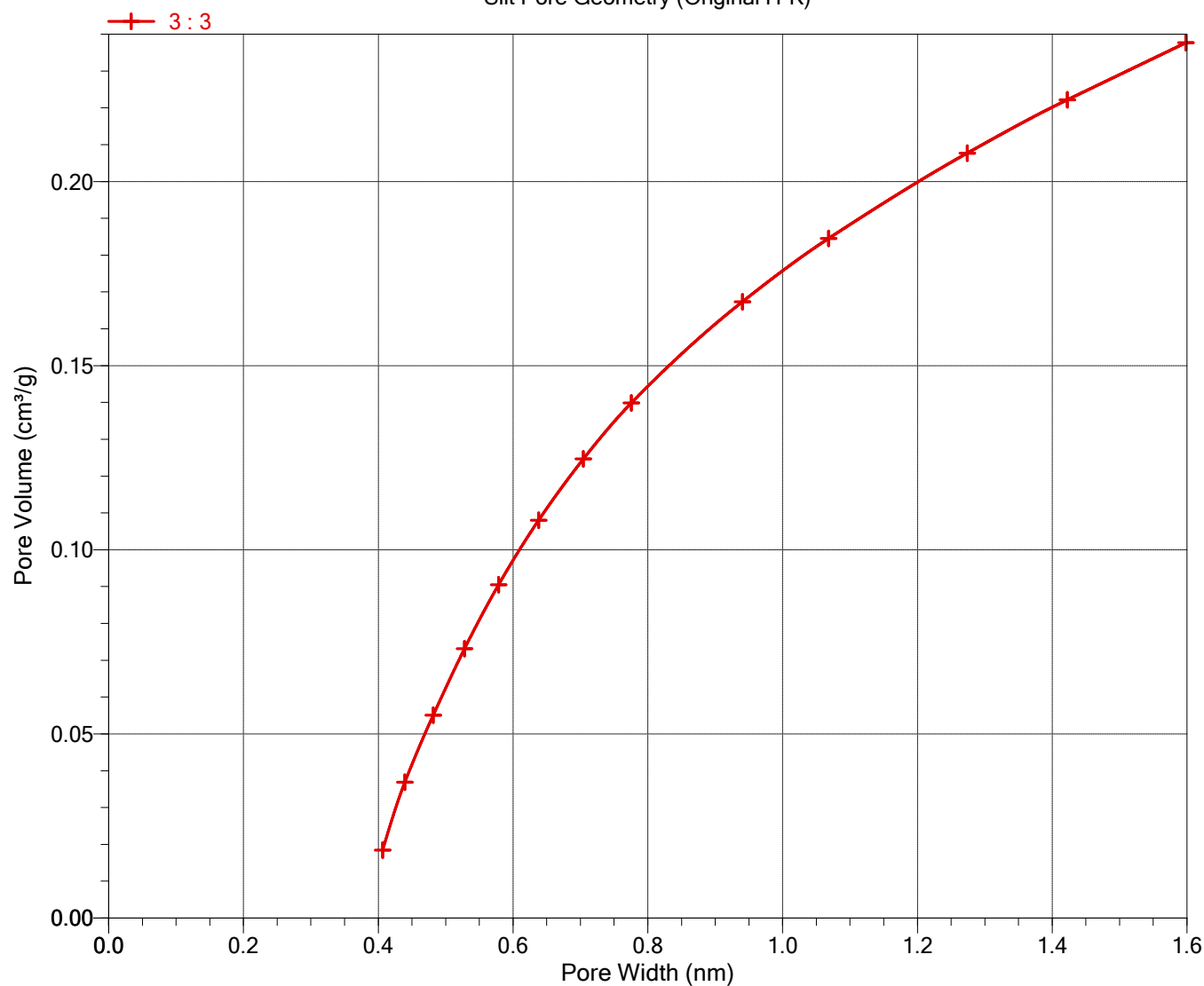
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Horvath-Kawazoe Cumulative Pore Volume Plot

Slit Pore Geometry (Original H-K)



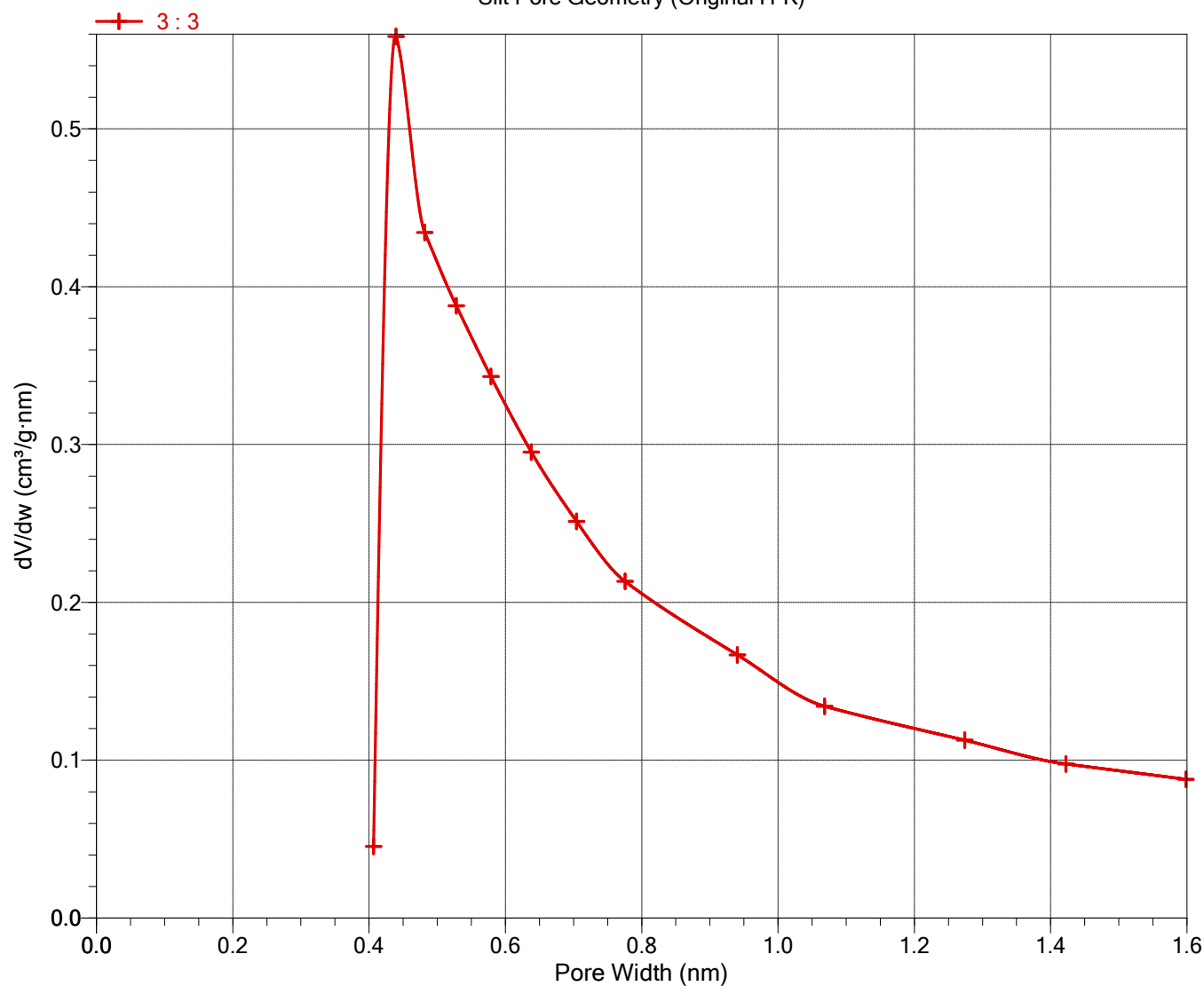
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Horvath-Kawazoe Differential Pore Volume Plot

Slit Pore Geometry (Original H-K)



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

NLDFT Advanced PSD Reports

Primary Data
4070- Unable to load deconvolution model Invalid.

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Porosity Distribution by Original Density Functional Theory

Model: N2 - DFT Model

Method: Non-negative Regularization: 0.00000

Standard Deviation of Fit: 1.06091 cm³/g STP

Volume in Pores	<	0.804 nm	:	0.02360 cm ³ /g
Total Volume in Pores	<=	252.570 nm	:	0.25865 cm ³ /g
Area in Pores	>	252.570 nm	:	0.000 m ² /g
Total Area in Pores	>=	0.804 nm	:	261.876 m ² /g

Pore Table

Pore Width (nm)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Area (m ² /g)	Incremental Pore Area (m ² /g)
0.804	0.02664	0.00304	7.552	7.552
0.858	0.02664	0.00000	7.552	0.000
0.929	0.02664	0.00000	7.552	0.000
1.001	0.02664	0.00000	7.552	0.000
1.090	0.02664	0.00000	7.552	0.000
1.179	0.04986	0.02322	46.928	39.377
1.269	0.07293	0.02306	83.284	36.356
1.358	0.08617	0.01324	102.780	19.496
1.483	0.10292	0.01676	125.374	22.594
1.591	0.11731	0.01438	143.462	18.088
1.716	0.12741	0.01010	155.240	11.778
1.859	0.13735	0.00994	165.938	10.698
2.002	0.15089	0.01354	179.469	13.531
2.162	0.16775	0.01686	195.060	15.591
2.341	0.18482	0.01707	209.643	14.583
2.520	0.20375	0.01893	224.665	15.022
2.734	0.22539	0.02164	240.498	15.832
2.949	0.24098	0.01558	251.068	10.570
3.181	0.25204	0.01106	258.023	6.955
3.431	0.25865	0.00661	261.876	3.853
3.699	0.25865	0.00000	261.876	0.000
4.003	0.25865	0.00000	261.876	0.000
4.325	0.25865	0.00000	261.876	0.000
4.664	0.25865	0.00000	261.876	0.000
5.040	0.25865	0.00000	261.876	0.000
5.433	0.25865	0.00000	261.876	0.000
5.880	0.25865	0.00000	261.876	0.000
6.344	0.25865	0.00000	261.876	0.000
6.845	0.25865	0.00000	261.876	0.000
7.399	0.25865	0.00000	261.876	0.000
7.988	0.25865	0.00000	261.876	0.000
8.632	0.25865	0.00000	261.876	0.000
9.311	0.25865	0.00000	261.876	0.000
10.061	0.25865	0.00000	261.876	0.000
10.866	0.25865	0.00000	261.876	0.000
11.723	0.25865	0.00000	261.876	0.000
12.653	0.25865	0.00000	261.876	0.000

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Pore Table				
Pore Width (nm)	Cumulative Pore Volume (cm ³ /g)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Area (m ² /g)	Incremental Pore Area (m ² /g)
13.671	0.25865	0.00000	261.876	0.000
14.761	0.25865	0.00000	261.876	0.000
15.941	0.25865	0.00000	261.876	0.000
17.210	0.25865	0.00000	261.876	0.000
18.586	0.25865	0.00000	261.876	0.000
20.069	0.25865	0.00000	261.876	0.000
21.660	0.25865	0.00000	261.876	0.000
23.393	0.25865	0.00000	261.876	0.000
25.252	0.25865	0.00000	261.876	0.000
27.271	0.25865	0.00000	261.876	0.000
29.451	0.25865	0.00000	261.876	0.000
31.792	0.25865	0.00000	261.876	0.000
34.330	0.25865	0.00000	261.876	0.000
37.064	0.25865	0.00000	261.876	0.000
40.031	0.25865	0.00000	261.876	0.000
43.230	0.25865	0.00000	261.876	0.000
46.679	0.25865	0.00000	261.876	0.000
50.396	0.25865	0.00000	261.876	0.000
54.417	0.25865	0.00000	261.876	0.000
58.760	0.25865	0.00000	261.876	0.000
63.442	0.25865	0.00000	261.876	0.000
68.499	0.25865	0.00000	261.876	0.000
73.968	0.25865	0.00000	261.876	0.000
79.865	0.25865	0.00000	261.876	0.000
86.245	0.25865	0.00000	261.876	0.000
93.126	0.25865	0.00000	261.876	0.000
100.560	0.25865	0.00000	261.876	0.000
108.566	0.25865	0.00000	261.876	0.000
117.233	0.25865	0.00000	261.876	0.000
126.580	0.25865	0.00000	261.876	0.000
136.677	0.25865	0.00000	261.876	0.000
147.596	0.25865	0.00000	261.876	0.000
159.355	0.25865	0.00000	261.876	0.000
172.079	0.25865	0.00000	261.876	0.000
185.804	0.25865	0.00000	261.876	0.000
200.619	0.25865	0.00000	261.876	0.000
216.632	0.25865	0.00000	261.876	0.000
233.913	0.25865	0.00000	261.876	0.000
252.570	0.25865	0.00000	261.876	0.000

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Porosity Distribution by Original Density Functional Theory

Model: N2 - DFT Model

Method: Non-negative Regularization: 0.00000

Standard Deviation of Fit: 1.06091 cm³/g STP

Isotherm Table

Relative Pressure (P/Po)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.000015520	16.2277	18.1116	-1.8839	-0.116089
0.000026102	22.1725	20.3962	1.7763	0.080113
0.000042841	26.3244	22.6983	3.6260	0.137745
0.000068697	30.9902	26.3389	4.6513	0.150088
0.000107744	35.3564	32.0886	3.2678	0.092424
0.000165451	38.6604	39.2856	-0.6253	-0.016174
0.000249000	43.3059	45.8780	-2.5721	-0.059394
0.000367617	47.5808	51.1297	-3.5489	-0.074587
0.000532902	51.2140	55.3008	-4.0867	-0.079797
0.000759152	55.7685	58.7271	-2.9585	-0.053050
0.001063641	59.4665	61.6589	-2.1924	-0.036868
0.001466847	63.1690	64.3029	-1.1339	-0.017950
0.001992604	67.4545	66.9687	0.4857	0.007201
0.002668156	70.9501	71.4874	-0.5373	-0.007573
0.003524104	74.5521	74.3641	0.1880	0.002521
0.004594232	78.5254	76.7116	1.8138	0.023099
0.005915212	81.9360	81.8510	0.0851	0.001038
0.007526182	85.5755	84.6998	0.8757	0.010233
0.009468212	89.2302	89.9817	-0.7515	-0.008422
0.011783670	91.9908	92.0195	-0.0288	-0.000313
0.014515520	94.9558	93.8770	1.0788	0.011361
0.017706521	98.2781	99.9715	-1.6934	-0.017231
0.021398440	101.8357	101.7709	0.0647	0.000636
0.025631230	105.3890	103.5401	1.8489	0.017544
0.030442240	108.5367	108.9766	-0.4399	-0.004053
0.035865448	111.6192	110.7702	0.8490	0.007606
0.041930798	114.9324	115.5619	-0.6295	-0.005477
0.048663601	118.1710	117.3986	0.7724	0.006536
0.056084011	121.0709	122.1649	-1.0940	-0.009036
0.064206667	124.1596	124.1221	0.0375	0.000302
0.073040441	127.4414	126.1413	1.3002	0.010202
0.082588248	130.8034	132.1073	-1.3039	-0.009968
0.092847057	134.0833	134.0267	0.0565	0.000421
0.103808001	137.3124	135.8518	1.4605	0.010637
0.115456402	140.6492	142.4797	-1.8305	-0.013015
0.127772301	143.9642	143.9787	-0.0145	-0.000100
0.140730694	147.3035	145.3690	1.9345	0.013133
0.154301897	150.7217	151.7981	-1.0764	-0.007141
0.168452203	154.1500	152.9618	1.1881	0.007708
0.183144197	157.5666	159.9668	-2.4002	-0.015233
0.198337302	160.9670	160.9534	0.0136	0.000084

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Table

Relative Pressure (P/Po)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.213988706	164.3238	161.8858	2.4380	0.014837
0.230053306	167.5782	169.8277	-2.2495	-0.013424
0.246484801	170.6850	170.6225	0.0624	0.000366
0.263235897	173.6099	171.3777	2.2322	0.012858
0.280259013	176.3526	177.2920	-0.9395	-0.005327
0.297506303	178.9065	177.9317	0.9749	0.005449
0.314930797	181.0473	182.3587	-1.3114	-0.007243
0.332486212	182.9735	182.8948	0.0787	0.000430
0.350127310	184.6431	183.3996	1.2434	0.006734
0.367810607	185.9998	186.1946	-0.1947	-0.001047
0.385494202	187.0333	186.6114	0.4220	0.002256
0.403138310	187.7483	187.0008	0.7475	0.003982
0.420704991	188.3229	187.3652	0.9577	0.005086
0.438158900	188.7934	187.7065	1.0868	0.005757
0.455466807	189.1144	188.0267	1.0877	0.005752
0.472598106	189.3984	188.3273	1.0711	0.005655
0.489524394	189.6643	188.6097	1.0546	0.005560
0.506219923	189.8972	188.8753	1.0219	0.005381
0.522661209	190.0858	189.1253	0.9605	0.005053
0.538827300	190.2592	189.3607	0.8985	0.004723
0.554699600	190.4282	189.5825	0.8457	0.004441
0.570261598	190.5919	189.7917	0.8002	0.004198
0.585499227	190.7530	189.9891	0.7639	0.004005
0.600400090	190.9025	190.1754	0.7272	0.003809
0.614954293	191.0307	190.3513	0.6794	0.003556
0.629153311	191.1426	190.5175	0.6251	0.003270
0.642990828	191.2461	190.6746	0.5715	0.002988
0.656461716	191.3475	190.8231	0.5244	0.002741
0.669562697	191.4462	190.9636	0.4826	0.002521
0.682291925	191.5410	191.0965	0.4445	0.002320
0.694648683	191.6314	191.2224	0.4090	0.002134
0.706633508	191.7169	191.3415	0.3754	0.001958
0.718248010	191.7975	191.4543	0.3432	0.001789
0.729494929	191.8736	191.5613	0.3123	0.001628
0.740377605	191.9452	191.6625	0.2826	0.001472
0.750900388	192.0124	191.7586	0.2538	0.001322
0.761068285	192.0755	191.8496	0.2259	0.001176
0.770887017	192.1348	191.9360	0.1988	0.001035
0.780362606	192.1903	192.0179	0.1725	0.000897
0.789501607	192.2424	192.0956	0.1469	0.000764
0.798311174	192.2912	192.1693	0.1220	0.000634
0.806798697	192.3373	192.2393	0.0980	0.000509
0.814971626	192.3810	192.3057	0.0753	0.000392
0.822837889	192.4225	192.3688	0.0538	0.000279
0.830405474	192.4618	192.4287	0.0331	0.000172
0.837682605	192.4987	192.4856	0.0132	0.000068

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Table

Relative Pressure (P/Po)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.844677329	192.5334	192.5396	-0.0061	-0.000032
0.851397991	192.5660	192.5909	-0.0250	-0.000130
0.857852995	192.5964	192.6397	-0.0433	-0.000225
0.864050388	192.6252	192.6861	-0.0608	-0.000316
0.869998574	192.6526	192.7301	-0.0776	-0.000403
0.875705481	192.6787	192.7720	-0.0933	-0.000484
0.881179392	192.7039	192.8118	-0.1079	-0.000560
0.886428118	192.7282	192.8497	-0.1214	-0.000630
0.891459525	192.7519	192.8857	-0.1338	-0.000694
0.896281302	192.7749	192.9199	-0.1450	-0.000752
0.900900900	192.7974	192.9525	-0.1551	-0.000804
0.905325770	192.8191	192.9834	-0.1644	-0.000852
0.909563184	192.8398	193.0129	-0.1731	-0.000898
0.913620114	192.8597	193.0409	-0.1812	-0.000940
0.917503417	192.8787	193.0676	-0.1889	-0.000979
0.921219707	192.8970	193.0929	-0.1960	-0.001016
0.924775481	192.9144	193.1171	-0.2027	-0.001051
0.928177178	192.9312	193.1401	-0.2089	-0.001083
0.931430817	192.9472	193.1619	-0.2147	-0.001113
0.934542298	192.9625	193.1827	-0.2202	-0.001141
0.937517405	192.9772	193.2025	-0.2253	-0.001168
0.940361619	192.9913	193.2214	-0.2301	-0.001192
0.943080306	193.0047	193.2393	-0.2346	-0.001215
0.945678592	193.0176	193.2564	-0.2388	-0.001237
0.948161721	193.0300	193.2727	-0.2427	-0.001257
0.950534225	193.0418	193.2881	-0.2464	-0.001276
0.952800930	193.0531	193.3029	-0.2498	-0.001294
0.954966187	193.0639	193.3169	-0.2531	-0.001311
0.957034409	193.0742	193.3303	-0.2562	-0.001327
0.959009588	193.0840	193.3430	-0.2590	-0.001342
0.960896015	193.0934	193.3551	-0.2618	-0.001356
0.962697208	193.1023	193.3667	-0.2643	-0.001369
0.964416981	193.1109	193.3777	-0.2668	-0.001381
0.966058910	193.1191	193.3881	-0.2691	-0.001393
0.967626274	193.1269	193.3981	-0.2712	-0.001404
0.969122529	193.1343	193.4076	-0.2733	-0.001415
0.970550597	193.1415	193.4166	-0.2752	-0.001425
0.971913695	193.1482	193.4253	-0.2770	-0.001434
0.973214507	193.1547	193.4335	-0.2788	-0.001443
0.974455774	193.1609	193.4413	-0.2804	-0.001452
0.975640416	193.1668	193.4487	-0.2819	-0.001460
0.976770699	193.1724	193.4558	-0.2834	-0.001467
0.977849126	193.1778	193.4626	-0.2848	-0.001474
0.978878021	193.1829	193.4690	-0.2861	-0.001481
0.979859591	193.1878	193.4751	-0.2873	-0.001487
0.980795979	193.1925	193.4810	-0.2885	-0.001493

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Table

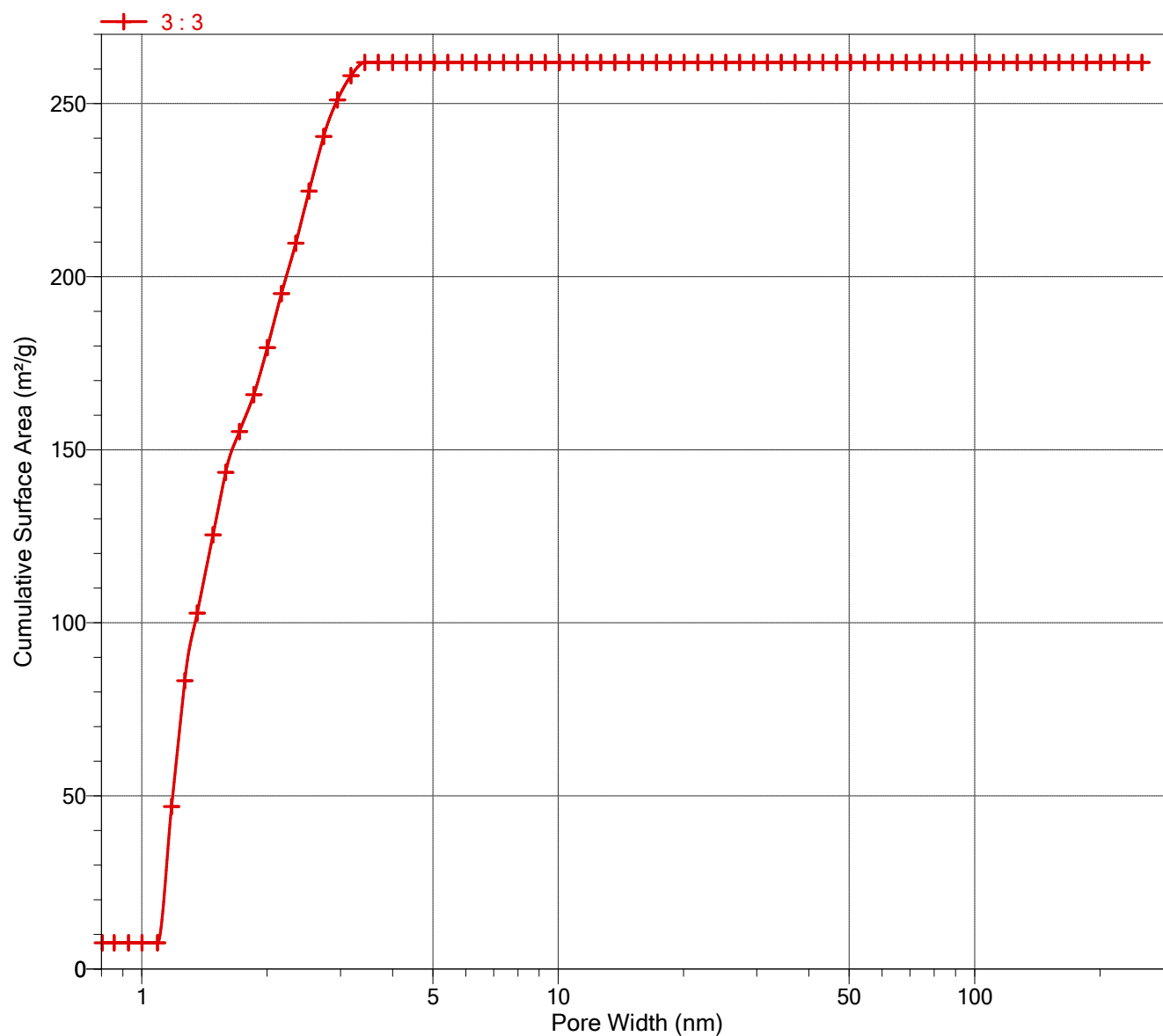
Relative Pressure (P/Po)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.981689274	193.1969	193.4866	-0.2896	-0.001499
0.982541502	193.2012	193.4919	-0.2907	-0.001505
0.983354270	193.2052	193.4969	-0.2917	-0.001510
0.984129488	193.2091	193.5017	-0.2927	-0.001515
0.984869003	193.2127	193.5063	-0.2936	-0.001519
0.985574186	193.2163	193.5107	-0.2944	-0.001524
0.986246824	193.2196	193.5148	-0.2952	-0.001528
0.986888289	193.2228	193.5188	-0.2960	-0.001532
0.987500012	193.2258	193.5226	-0.2967	-0.001536
0.988083303	193.2287	193.5262	-0.2974	-0.001539
0.988639593	193.2315	193.5296	-0.2981	-0.001543
0.989170074	193.2342	193.5329	-0.2987	-0.001546
0.989675879	193.2367	193.5360	-0.2993	-0.001549
0.990158200	193.2391	193.5390	-0.2999	-0.001552
0.990618110	193.2414	193.5418	-0.3004	-0.001555
0.991056621	193.2436	193.5445	-0.3009	-0.001557
0.991474688	193.2456	193.5470	-0.3014	-0.001560
0.991873324	193.2476	193.5495	-0.3019	-0.001562
0.992253423	193.2495	193.5518	-0.3023	-0.001564
0.992615700	193.2513	193.5540	-0.3027	-0.001566
0.992961228	193.2530	193.5562	-0.3031	-0.001569
0.993290603	193.2547	193.5582	-0.3035	-0.001570
0.993604600	193.2562	193.5601	-0.3039	-0.001572
0.993903875	193.2577	193.5619	-0.3042	-0.001574
0.994189322	193.2592	193.5637	-0.3045	-0.001576
0.994461298	193.2605	193.5653	-0.3048	-0.001577
0.994720697	193.2618	193.5669	-0.3051	-0.001579

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Cumulative Surface Area vs. Pore Width

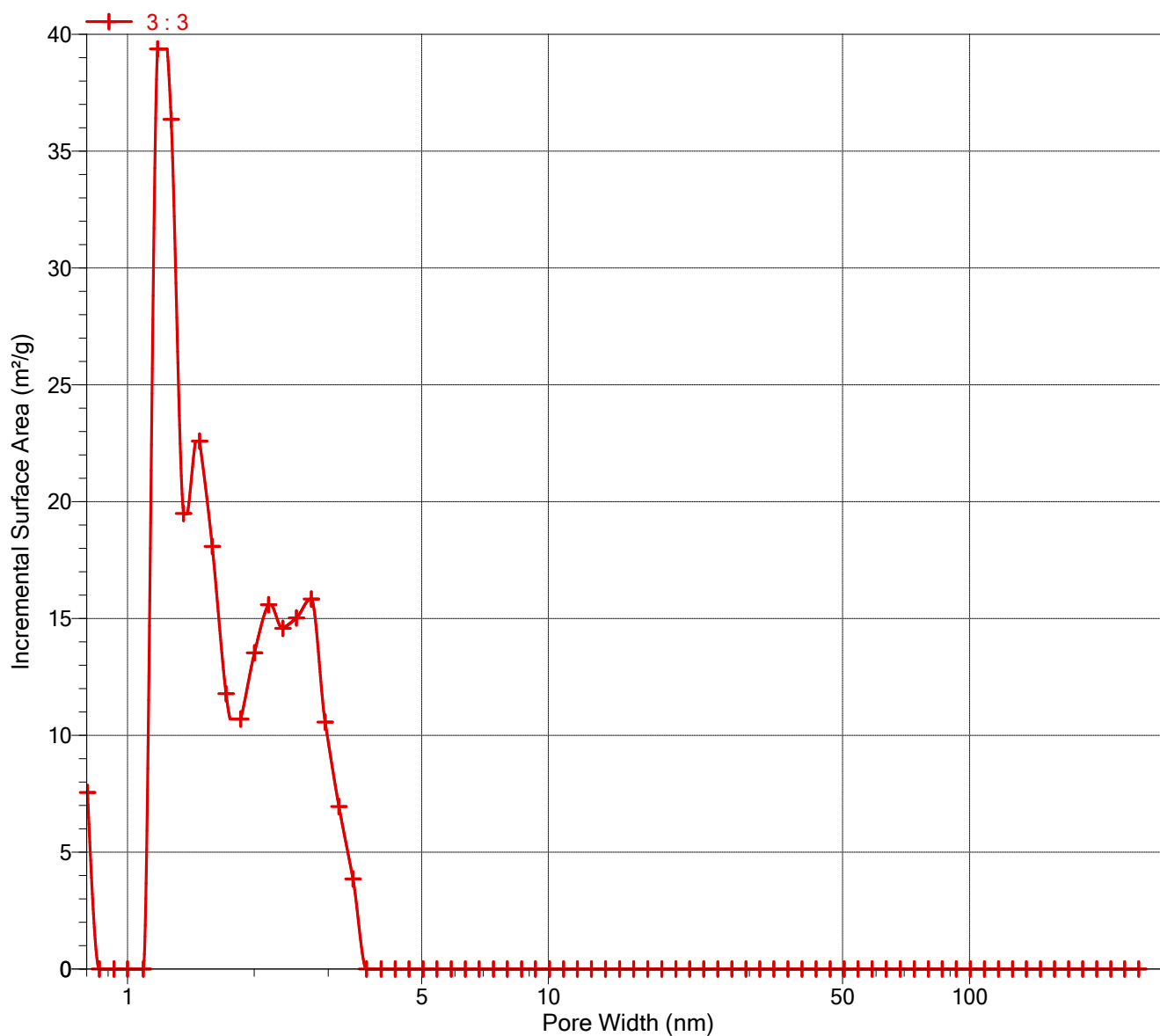


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Incremental Surface Area vs. Pore Width

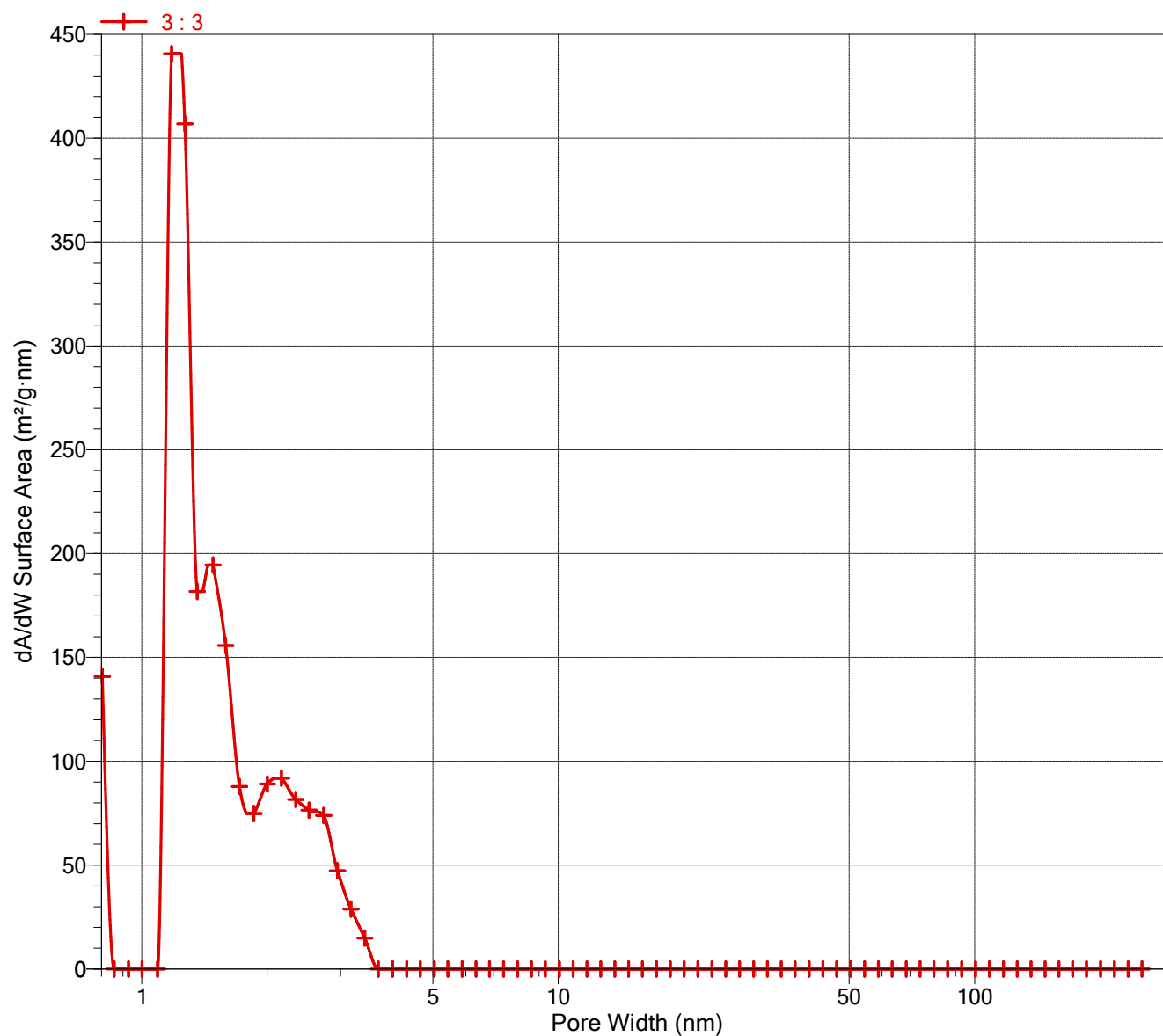


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
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Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dA/dW Surface Area vs. Pore Width

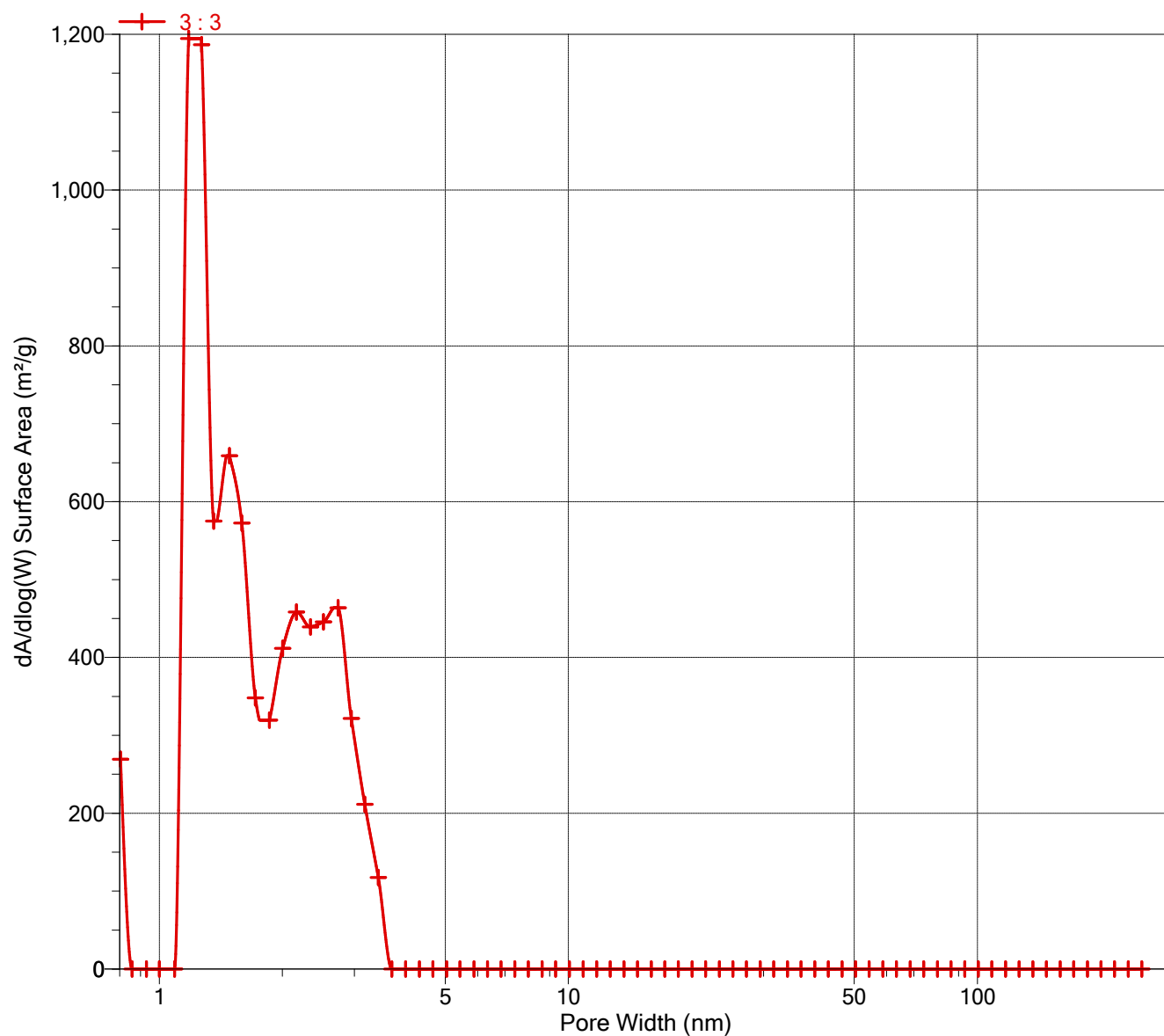


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dA/dlog(W) Surface Area vs. Pore Width

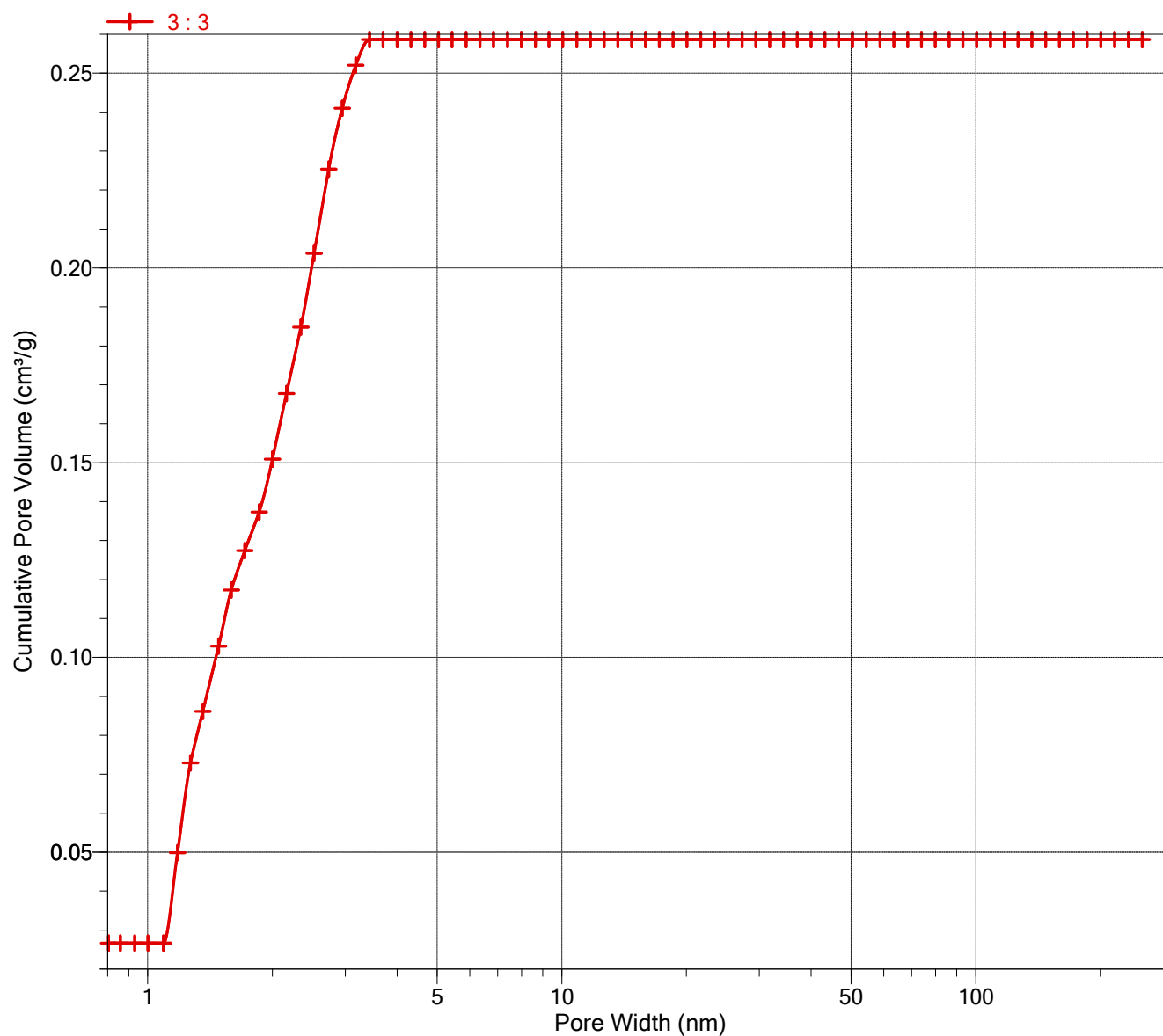


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Cumulative Pore Volume vs. Pore Width

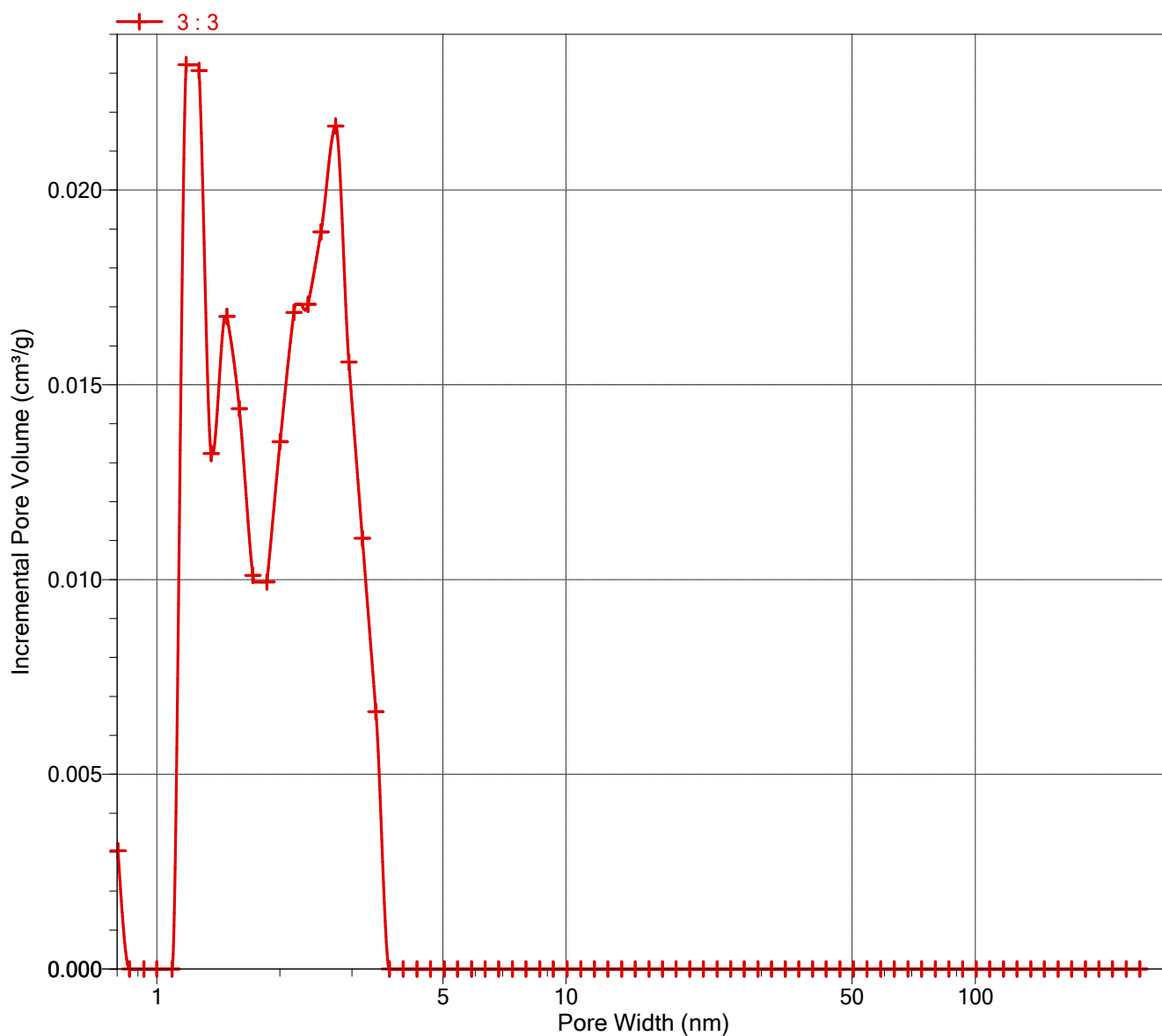


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Incremental Pore Volume vs. Pore Width

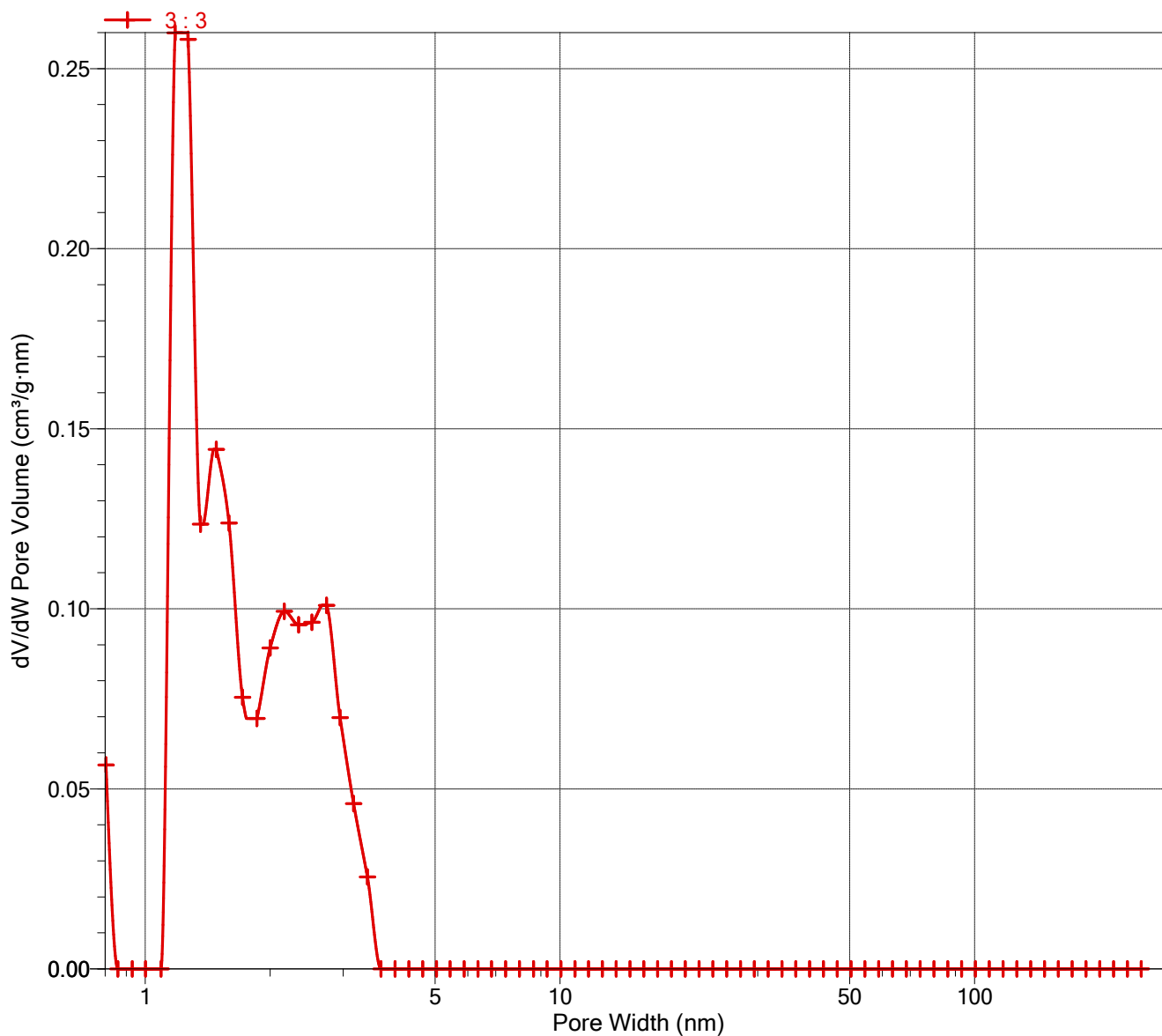


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dV/dW Pore Volume vs. Pore Width

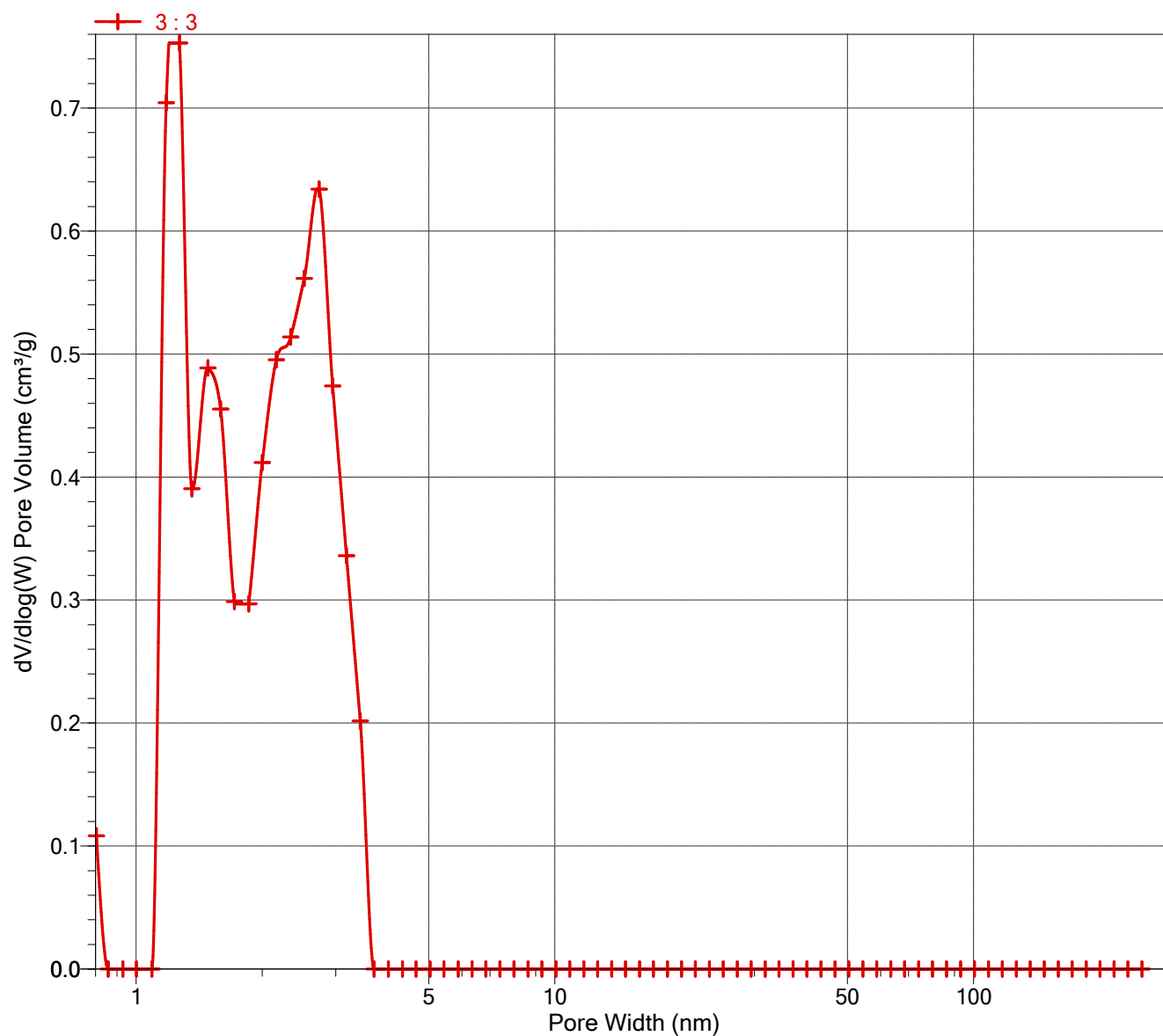


Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dV/dlog(W) Pore Volume vs. Pore Width



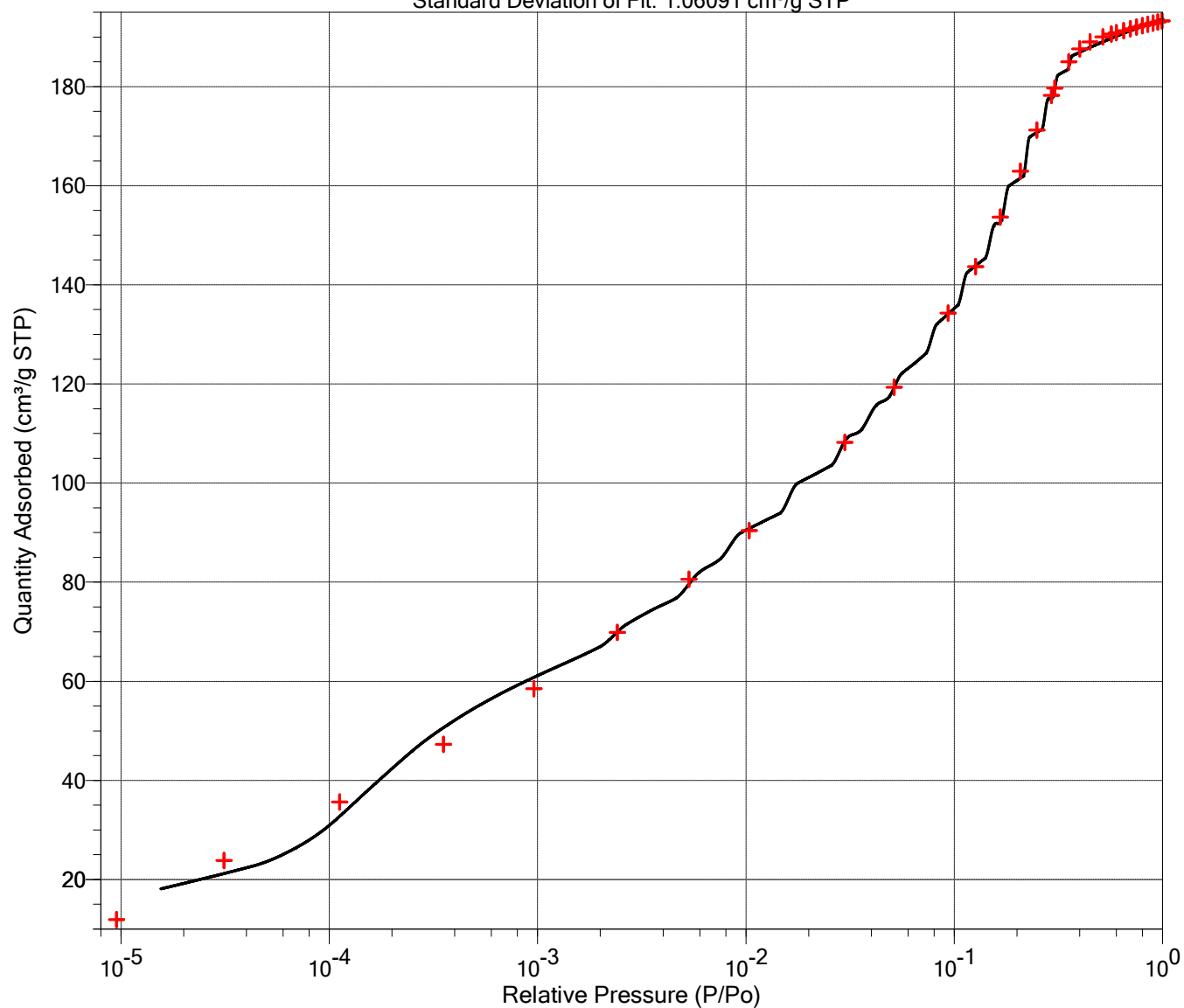
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Goodness of Fit

Standard Deviation of Fit: 1.06091 cm³/g STP



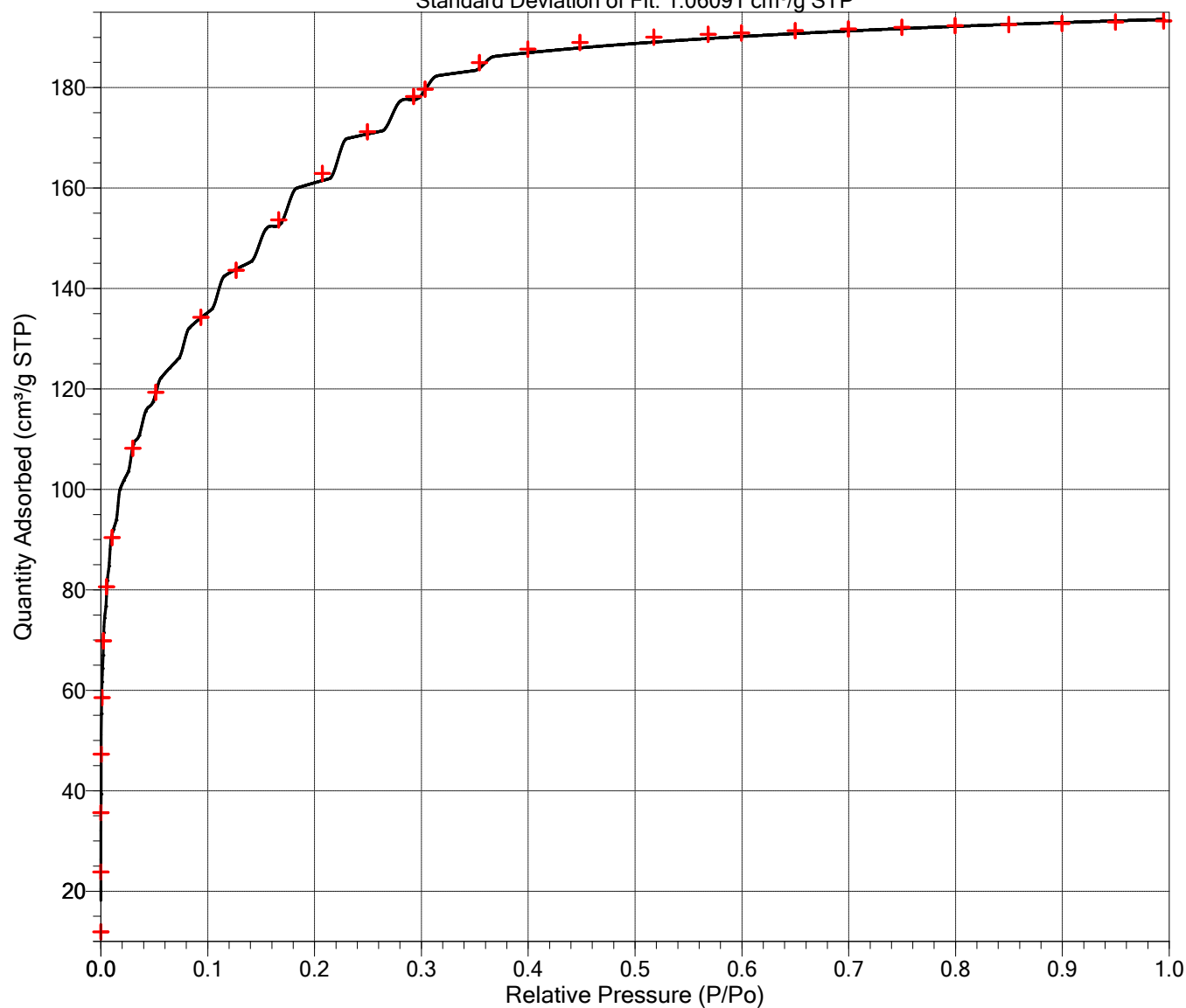
Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Goodness of Fit

Standard Deviation of Fit: 1.06091 cm³/g STP



Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

DFT Surface Energy Reports

Primary Data
4070- Unable to load deconvolution model Invalid.

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dubinin-Astakhov Tabular Report

Slope: -0.075718 ± 0.000643
Y-intercept: 2.175613 ± 0.003303
Correlation coefficient: 0.999819
Astakhov fitted relative pressure range: 0.000100000 to 0.050000000 P/Po

Characteristic energy: 14.029119 kJ/mol
Limiting micropore capacity: 149.8350 cm³/g STP
Limiting micropore volume: 0.231765 ± 0.001770 cm³/g
Equivalent surface area: 491.624115 m²/g

Affinity coefficient (beta): 0.33000
Optimize exponent: Yes
Exponent: 1.5316

Density conversion factor: 0.0015468
Molecular cross-sectional area: 0.162 nm²

Medek Quantities

Mean equivalent pore width: 1.885707 nm
Maximum differential pore volume: 0.232468 cm³/g·nm
Modal equivalent pore width: 1.650654 nm

Absolute Pressure (mmHg)	Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	Log Quantity Adsorbed	Log (Po/P) ^{1.5316}	Differential Pore Volume (cm ³ /g·nm)
0.007248	0.000009526	11.9163	1.0761	11.83979	0.152324
0.023767	0.000031240	23.8343	1.3772	10.02862	0.206362
0.085284	0.000111980	35.6123	1.5516	8.201497	0.228402
0.269154	0.000353382	47.2740	1.6746	6.669031	0.232062
0.731078	0.000960129	58.5160	1.7673	5.428324	0.223933
1.834254	0.002409210	69.8457	1.8441	4.367114	0.207349
4.054148	0.005326624	80.5747	1.9062	3.518263	0.185840
7.885444	0.010362489	90.4213	1.9563	2.856898	0.162359
22.705696	0.029839910	108.1951	2.0342	1.908906	0.113832
39.146824	0.051443133	119.3015	2.0766	1.474669	0.081283
71.153618	0.093514660	134.2817	2.1280	1.044944	0.037520
96.273193	0.126526362	143.6408	2.1573	0.8478205	0.012563
126.554810	0.166340920	153.6487	2.1865	0.6821493	0.000000
157.804840	0.207394457	162.9293	2.2120	0.5579511	0.000000
189.758972	0.249378221	171.2076	2.2335	0.4609882	0.000000
222.788879	0.292748263	178.2364	2.2510	0.3820198	0.000000
230.969696	0.303513230	179.6804	2.2545	0.3649548	0.000000
269.538483	0.354221735	184.9862	2.2671	0.2950737	0.000000
304.151062	0.399682818	187.6291	2.2733	0.2441495	0.000000
341.279633	0.448501203	188.9984	2.2765	0.1987623	0.000000
393.905731	0.517624618	190.0317	2.2788	0.147006	0.000000
432.541595	0.568444661	190.5729	2.2801	0.116223	0.000000
456.152832	0.599454175	190.8936	2.2808	0.09990893	0.000000
494.549194	0.649864304	191.2976	2.2817	0.07680373	0.000000

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Absolute Pressure (mmHg)	Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	Log Quantity Adsorbed	Log (Po/P) ^{1.5316}	Differential Pore Volume (cm ³ /g·nm)
532.453125	0.699682550	191.6675	2.2825	0.0575885	0.000000
570.515991	0.749750827	192.0051	2.2833	0.04142555	0.000000
608.513855	0.799583138	192.2982	2.2840	0.02812374	0.000000
646.714111	0.849768819	192.5581	2.2846	0.0172887	0.000000
684.766663	0.899760560	192.7918	2.2851	0.008913337	0.000000
722.745972	0.949696323	193.0376	2.2856	0.002976397	0.000000
757.049866	0.994836732	193.2624	2.2861	8.791525e-05	0.000000

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No
Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

MP Tabular Report

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

Total Pore Surface Area: 573.4148 m²/g
Density Conversion Factor: 0.0015468

Pore Hydraulic Radius Interval (nm)	Average Pore Hydraulic Radius (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Differential Pore Volume (cm ³ /g· nm)	Incremental Pore Area (m ² /g)
0.000 - 0.387	0.1937	0.0000	0.0000	0.0000	0.0000
0.387 - 0.400	0.3937	0.0001	0.0001	0.0052	0.1665
0.400 - 0.420	0.4100	0.0064	0.0065	0.3223	15.7210
0.420 - 0.440	0.4300	0.0109	0.0174	0.5469	25.4365
0.440 - 0.460	0.4500	0.0184	0.0359	0.9222	40.9855
0.460 - 0.480	0.4700	0.0292	0.0651	1.4591	62.0878
0.480 - 0.500	0.4900	0.0312	0.0963	1.5614	63.7305
0.500 - 0.520	0.5100	0.0455	0.1418	2.2736	89.1620
0.520 - 0.540	0.5300	0.0338	0.1756	1.6901	63.7781
0.540 - 0.560	0.5500	0.0398	0.2154	1.9915	72.4194
0.560 - 0.580	0.5700	0.0346	0.2500	1.7286	60.6512
0.580 - 0.600	0.5900	0.0132	0.2632	0.6588	22.3336
0.600 - 0.620	0.6100	0.0142	0.2774	0.7105	23.2948
0.620 - 0.640	0.6300	0.0020	0.2794	0.1024	3.2496
0.640 - 0.660	0.6500	0.0042	0.2836	0.2075	6.3859
0.660 - 0.680	0.6700	0.0036	0.2872	0.1811	5.4048
0.680 - 0.700	0.6900	0.0005	0.2877	0.0254	0.7357
0.700 - 0.720	0.7100	0.0008	0.2885	0.0384	1.0812
0.720 - 0.740	0.7300	0.0011	0.2896	0.0547	1.4994
0.740 - 0.760	0.7500	0.0022	0.2917	0.1096	2.9233
0.760 - 0.780	0.7700	0.0013	0.2931	0.0653	1.6974
0.780 - 0.800	0.7900	0.0008	0.2938	0.0388	0.9820
0.800 - 0.820	0.8100	0.0003	0.2941	0.0148	0.3662
0.820 - 0.840	0.8300	0.0004	0.2945	0.0191	0.4596
0.840 - 0.860	0.8500	0.0006	0.2951	0.0303	0.7119
0.860 - 0.880	0.8700	0.0006	0.2957	0.0289	0.6638
0.880 - 0.900	0.8900	0.0004	0.2961	0.0216	0.4843
0.900 - 0.920	0.9100	0.0005	0.2966	0.0250	0.5503
0.920 - 0.940	0.9300	0.0006	0.2972	0.0285	0.6138
0.940 - 0.960	0.9500	0.0004	0.2976	0.0209	0.4390
0.960 - 0.980	0.9700	0.0003	0.2979	0.0158	0.3254
0.980 - 1.000	0.9900	0.0004	0.2983	0.0180	0.3628
1.000 - 1.020	1.0100	0.0004	0.2987	0.0202	0.4002
1.020 - 1.040	1.0300	0.0004	0.2991	0.0214	0.4147
1.040 - 1.060	1.0500	0.0002	0.2993	0.0099	0.1881
1.060 - 1.080	1.0700	0.0002	0.2995	0.0080	0.1503
1.080 - 1.100	1.0900	0.0002	0.2997	0.0102	0.1874
1.100 - 1.120	1.1100	0.0002	0.2999	0.0125	0.2245
1.120 - 1.140	1.1300	0.0003	0.3002	0.0148	0.2616
1.140 - 1.160	1.1500	0.0003	0.3006	0.0169	0.2932
1.160 - 1.180	1.1700	0.0002	0.3007	0.0085	0.1446
1.180 - 1.200	1.1900	0.0001	0.3008	0.0041	0.0689

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56
Completed: 2023/9/18 8:59:51
Report time: 2023/9/18 9:18:01
Sample mass: 0.1997 g
Analysis free space: 83.0568 cm³
Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Pore Hydraulic Radius Interval (nm)	Average Pore Hydraulic Radius (nm)	Incremental Pore Volume (cm ³ /g)	Cumulative Pore Volume (cm ³ /g)	Differential Pore Volume (cm ³ /g· nm)	Incremental Pore Area (m ² /g)
1.200 - 1.220	1.2100	0.0001	0.3009	0.0046	0.0757
1.220 - 1.240	1.2300	0.0001	0.3010	0.0051	0.0825
1.240 - 1.260	1.2500	0.0001	0.3011	0.0056	0.0893
1.260 - 1.280	1.2700	0.0001	0.3012	0.0061	0.0961
1.280 - 1.300	1.2900	0.0001	0.3014	0.0066	0.1029
1.300 - 1.320	1.3100	0.0001	0.3015	0.0072	0.1097
1.320 - 1.340	1.3300	0.0001	0.3016	0.0045	0.0684
1.340 - 1.360	1.3500	-0.0000	0.3016	-0.0007	-0.0108
1.360 - 1.380	1.3700	0.0000	0.3016	0.0001	0.0019
1.380 - 1.400	1.3900	0.0000	0.3016	0.0012	0.0167
1.400 - 1.420	1.4100	0.0000	0.3017	0.0022	0.0315
1.420 - 1.440	1.4300	0.0001	0.3017	0.0033	0.0463
1.440 - 1.460	1.4500	0.0001	0.3018	0.0044	0.0611
1.460 - 1.480	1.4700	0.0001	0.3019	0.0056	0.0759
1.480 - 1.500	1.4900	0.0001	0.3021	0.0068	0.0907
1.500 - 1.520	1.5100	0.0002	0.3022	0.0080	0.1055
1.520 - 1.540	1.5300	0.0002	0.3024	0.0092	0.1204
1.540 - 1.560	1.5500	0.0002	0.3026	0.0105	0.1352
1.560 - 1.580	1.5700	0.0002	0.3028	0.0113	0.1444
1.580 - 1.600	1.5900	0.0001	0.3029	0.0034	0.0427
1.600 - 1.620	1.6100	0.0000	0.3029	0.0000	0.0000
1.620 - 1.640	1.6300	-0.0000	0.3029	-0.0000	-0.0000
1.640 - 1.660	1.6500	0.0000	0.3029	0.0000	0.0000
1.660 - 1.680	1.6700	0.0000	0.3029	0.0000	0.0000
1.680 - 1.700	1.6900	0.0000	0.3029	0.0000	0.0000
1.700 - 1.720	1.7100	0.0000	0.3029	0.0000	0.0000
1.720 - 1.740	1.7300	-0.0000	0.3029	-0.0000	-0.0000
1.740 - 1.760	1.7500	0.0000	0.3029	0.0000	0.0000
1.760 - 1.780	1.7700	0.0000	0.3029	0.0000	0.0000
1.780 - 1.800	1.7900	0.0000	0.3029	0.0000	0.0000
1.800 - 1.820	1.8100	0.0000	0.3029	0.0000	0.0000
1.820 - 1.840	1.8300	-0.0000	0.3029	-0.0000	-0.0000
1.840 - 1.860	1.8500	0.0000	0.3029	0.0000	0.0000
1.860 - 1.880	1.8700	0.0000	0.3029	0.0000	0.0000
1.880 - 1.900	1.8900	0.0000	0.3029	0.0000	0.0000
1.900 - 1.920	1.9100	0.0000	0.3029	0.0000	0.0000
1.920 - 1.940	1.9300	-0.0000	0.3029	-0.0000	-0.0000
1.940 - 1.960	1.9500	0.0000	0.3029	0.0000	0.0000

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

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Report time: 2023/9/18 9:18:01
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Low pressure dose: 12.0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 27.7718 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Sample Information

Method: Default
Sample: 3
Operator:
Submitter:
Mass type: Entered
Sample mass: 0.1997 g
Density: 1.000 g/cm³
Type of data: Automatically collected
Instrument type: 2460
Original instrument type: 2460
Comments:

Sample Tube

Sample tube: 1
Ambient free space: 1.0000 cm³
Analysis free space: 1.0000 cm³
Non-ideality factor: 0.0000620
Use isothermal jacket: Yes
Use filler rod: No
Vacuum seal type: None

Degas Conditions

Degas conditions: Degas Conditions

Smart VacPrep evacuation

Backfill sample tube: Automatic
Evacuation rate: 5.0 mmHg/s
Unrest. evacuation from: 5.0 mmHg
Vacuum level: 1.000000e-02 mmHg
Evacuation time: 10 min
Temperature ramp rate: 10.0 °C/min
Target temperature: 30 °C
Hold pressure: 100 mmHg

Heating Phase

Sample prep: Stage	Temperature (° C)	Ramp Rate (° C/min)	Time (min)
1	30	10.0	10

Analysis Conditions

Analysis conditions: Run Conditions
Isotherm collection: Target Pressure
Absolute pressure dosing: No

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

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Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Pressure Table

Starting Pressure (P/Po)	Pressure Increment (P/Po)	Ending Pressure (P/Po)
0.010000000	0.020000000	0.050000000
0.050000000	0.040000000	0.300000000
0.300000000	0.050000000	0.995000000
0.995000000	0.050000000	0.010000000

Preparation

Fast evacuation: No
Evacuation rate: 5.0 mmHg/s
Unrestricted evacuation from: 5.0 mmHg
Vacuum setpoint: 10 µmHg
Evacuation time: 0.10 h

Leak test: No
Use TranSeal: No

Free Space

Measured before analysis
Lower Dewar for evacuation: Yes
Evacuation time: 0.10 h
Outgas test: No

Po and Temperature

Po type: Measured in Psat tube for each point
Temperature type: Entered
Temperature: -195.850 °C

Dosing

Use first pressure fixed dose: No
Use maximum volume increment: No
Target tolerance: 5.0% or 5.000 mmHg
Low pressure dosing: Yes
Dose amount: 12.0000 cm³/g STP
Minimum equilibration delay: 0.00 h
Maximum equilibration delay: 3.00 h
Maximum number of decants: 6

Equilibration

	Relative Pressure (P/Po)	Equilibration Interval (s)
1	0.010000000	20
2	1.000000000	10

Minimum equilibration delay at P/Po >= 0.995: 600 s

Sample Backfill

Backfill at start of analysis: Yes
Backfill at end of analysis: Yes

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Sample Backfill

Backfill gas: N2

Adsorptive Properties

Adsorptive: Nitrogen @ 77.35 K (N2)
Non-condensing adsorptive: No
Maximum manifold pressure: 925.00 mmHg
Therm. tran. hard-sphere diameter: 0.38600 nm
Molecular cross-sectional area: 0.162 nm²
Adsorbate molecular weight: 28.01
Thermal conductivity: 1.00
Non-ideality factor: 0.0000620
Density conversion factor: 0.0015468
Dosing method: Normal

Psat vs. Temperature Table

	Saturation Pressure (mmHg)	Temperature (° C)
1	600.193	-197.75
2	634.512	-197.30
3	674.383	-196.80
4	720.420	-196.25
5	742.119	-196.00
6	759.833	-195.80
7	777.867	-195.60
8	805.525	-195.30
9	853.268	-194.80
10	903.122	-194.30

Sample: 3
Operator:
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File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

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Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Sample Log

Date	Time	Log Message
2023/9/17	10:23:56	Starting a sample analysis for F:\DATA\wangcheng\FXL\BET-20230917\3.SMP on port 3.
2023/9/17	11:35:23	Measured warm freespace: 27.7718 cm ³ (P1: 799.99 mmHg, P2: 583.26 mmHg, Tman: 300.1 K).
2023/9/17	11:47:21	Measured cold freespace: 83.0568 cm ³ (P3: 195.03 mmHg).
2023/9/17	12:12:09	Low pressure data collection started
2023/9/18	1:31:38	Standard data collection started.
2023/9/18	8:47:17	Termination started.
2023/9/18	8:59:51	Finished a sample analysis for F:\DATA\wangcheng\FXL\BET-20230917\3.SMP on port 3.

Sample: 3
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\3.SMP

Started: 2023/9/17 10:23:56	Analysis adsorptive: N2
Completed: 2023/9/18 8:59:51	Analysis bath temp.: -195.850 °C
Report time: 2023/9/18 9:18:01	Thermal correction: No
Sample mass: 0.1997 g	Ambient free space: 27.7718 cm ³ Measured
Analysis free space: 83.0568 cm ³	Equilibration interval: 20 s
Low pressure dose: 12.0000 cm ³ /g STP	Sample density: 1.000 g/cm ³
Automatic degas: No	

Validation Report

Summary

Isotherm: Warning
BET: Passed

Isotherm Reports

Free Space: Low free space values may be
observed when using liquid argon or ice baths.

Po Passed

Pressure/Quantity adsorbed: Passed

Desorption Passed