

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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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Automatic degas: No	

Summary Report

Surface Area

Single point surface area at P/Po = 0.299710406: 462.7373 m²/g

BET Surface Area: 472.9540 m²/g

Langmuir Surface Area: 1,724.8874 m²/g

t-Plot Micropore Area: 8.0405 m²/g

t-Plot external surface area: 464.9135 m²/g

BJH Adsorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 467.7053 m²/g

BJH Desorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 547.7715 m²/g

D-H Adsorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 456.0722 m²/g

D-H Desorption cumulative surface area of pores
between 1.7000 nm and 300.0000 nm width: 525.3832 m²/g

Pore Volume

Single point adsorption total pore volume of pores
less than 350.0847 nm width at P/Po = 0.994509059: 0.591660 cm³/g

t-Plot micropore volume: 0.002118 cm³/g

BJH Adsorption cumulative volume of pores
between 1.7000 nm and 300.0000 nm width: 0.572125 cm³/g

BJH Desorption cumulative volume of pores
between 1.7000 nm and 300.0000 nm width: 0.616451 cm³/g

Pore Size

Adsorption average pore diameter (4V/A by BET): 5.0040 nm

Desorption average pore diameter (4V/A by BET): 5.0005 nm

BJH Adsorption average pore width (4V/A): 4.8930 nm

BJH Desorption average pore width (4V/A): 4.5015 nm

Freundlich

Qm·C: 41.4024 ± 1.3762 cm³/g STP

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Freundlich

m: 3.4863 ± 0.1833

DFT Pore Size

Volume in Pores	<	0.804 nm	:	0.00953 cm ³ /g
Total Volume in Pores	<=	233.913 nm	:	0.55168 cm ³ /g
Area in Pores	>	233.913 nm	:	0.000 m ² /g
Total Area in Pores	>=	0.804 nm	:	269.676 m ² /g

Horvath-KawazoeMaximum pore volume at P/Po = 0.167540859: 0.195645 cm³/g

Median pore width: 0.7065 nm

Dubinin-AstakhovMicropore surface area: 438.7016 m²/g**Pass/Fail**

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

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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)
0.000017519	0.013402	11.9835	01:43	765.272766
0.000092203	0.070464	23.8704	03:17	765.034912
0.000382980	0.292344	35.4121	04:34	764.222229
0.001276679	0.974211	46.9455	05:50	763.339661
0.003427079	2.614624	57.8217	06:38	763.082031
0.007560207	5.768948	67.6670	07:07	762.930725
0.010781745	8.233700	72.5318	07:46	763.067383
0.030008793	22.922024	87.8490	09:53	763.670410
0.049470828	37.792152	96.6641	10:05	763.843567
0.091976337	70.281250	109.7567	10:15	763.928040
0.142024542	108.547943	121.2793	10:25	764.123169
0.167540859	128.044922	126.4840	10:39	764.290039
0.206468413	157.805847	134.0551	10:47	764.260864
0.246894147	188.724762	141.6635	10:56	764.309875
0.287270725	219.631287	149.3869	11:06	764.395447
0.299710406	229.129776	151.8135	11:16	764.544617
0.345874706	264.420410	161.2949	11:23	764.503906
0.393453221	300.801880	172.0877	11:34	764.497681
0.448708776	343.066315	186.4578	11:46	764.517517
0.498236163	380.866089	201.8707	12:03	764.563416
0.545788310	417.068848	220.4577	12:21	764.428833
0.595848519	455.163025	245.3981	12:40	764.158630
0.643999954	491.966949	277.1146	13:03	763.890503
0.694502271	530.557007	319.0723	13:29	763.923889
0.754134812	575.858521	365.4312	13:59	763.938477
0.811430417	619.502014	378.8678	14:33	763.601563
0.866475398	661.587708	380.3107	14:43	763.469055
0.917416397	700.452515	381.2053	14:46	763.538940
0.949042568	724.603210	381.7573	14:49	763.505554
0.994509059	759.327698	382.5058	14:51	763.509705
0.927200236	707.881897	382.1017	14:53	763.520142
0.877758912	670.098694	381.2673	14:55	763.461731
0.827886845	631.989990	381.2673	14:58	763.419983
0.795757954	607.472656	380.3658	15:01	763.377258
0.745937391	569.445618	379.6756	15:03	763.388733
0.696277567	531.484680	378.5268	15:06	763.395996
0.646127294	493.188995	377.2076	15:10	763.322998
0.598276255	456.560699	375.7624	15:14	763.300049
0.548340195	418.362183	358.7049	15:55	763.126892
0.498232163	380.035553	242.9331	17:07	762.960999
0.440155856	335.622467	208.7193	17:30	762.768005
0.397260499	302.908173	186.5005	17:51	762.508240
0.347668289	265.062927	174.4305	18:05	762.492554
0.282446655	215.354645	162.9209	18:18	762.401794
0.249436325	190.205063	149.3494	18:37	762.461304
0.200251576	152.714157	142.8829	18:46	762.539551
		133.3986	18:56	762.611511

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Thermal correction: No
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Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Tabular Report

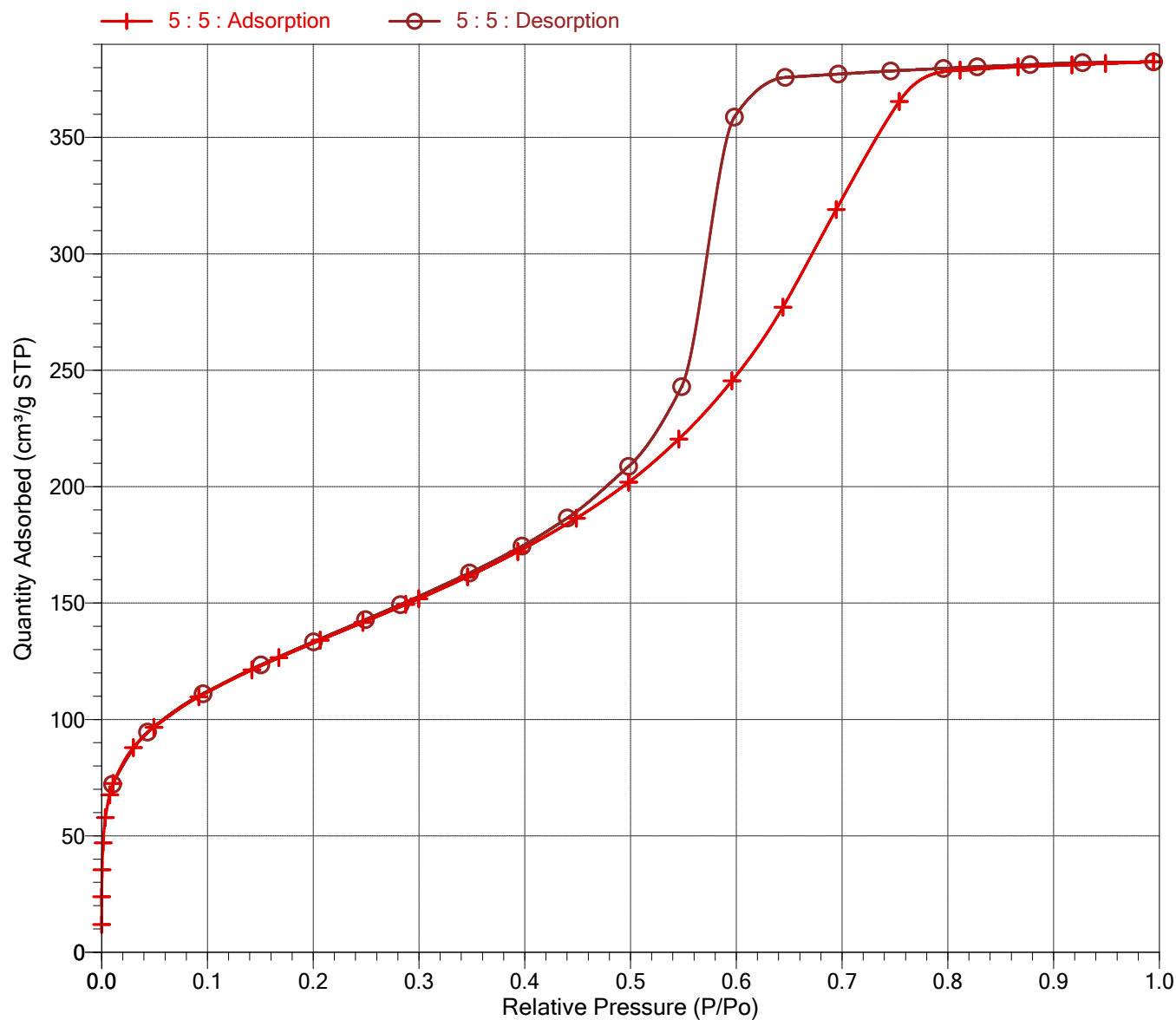
Relative Pressure (P/Po)	Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	Elapsed Time (h:min)	Saturation Pressure (mmHg)
0.150300267	114.623062	123.4298	19:06	762.627136
0.095734062	73.017685	111.0940	19:18	762.713745
0.043225311	32.972145	94.5329	19:33	762.797180
0.010285381	7.847355	72.1775	19:49	762.962036

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Thermal correction: No
Ambient free space: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Linear Plot

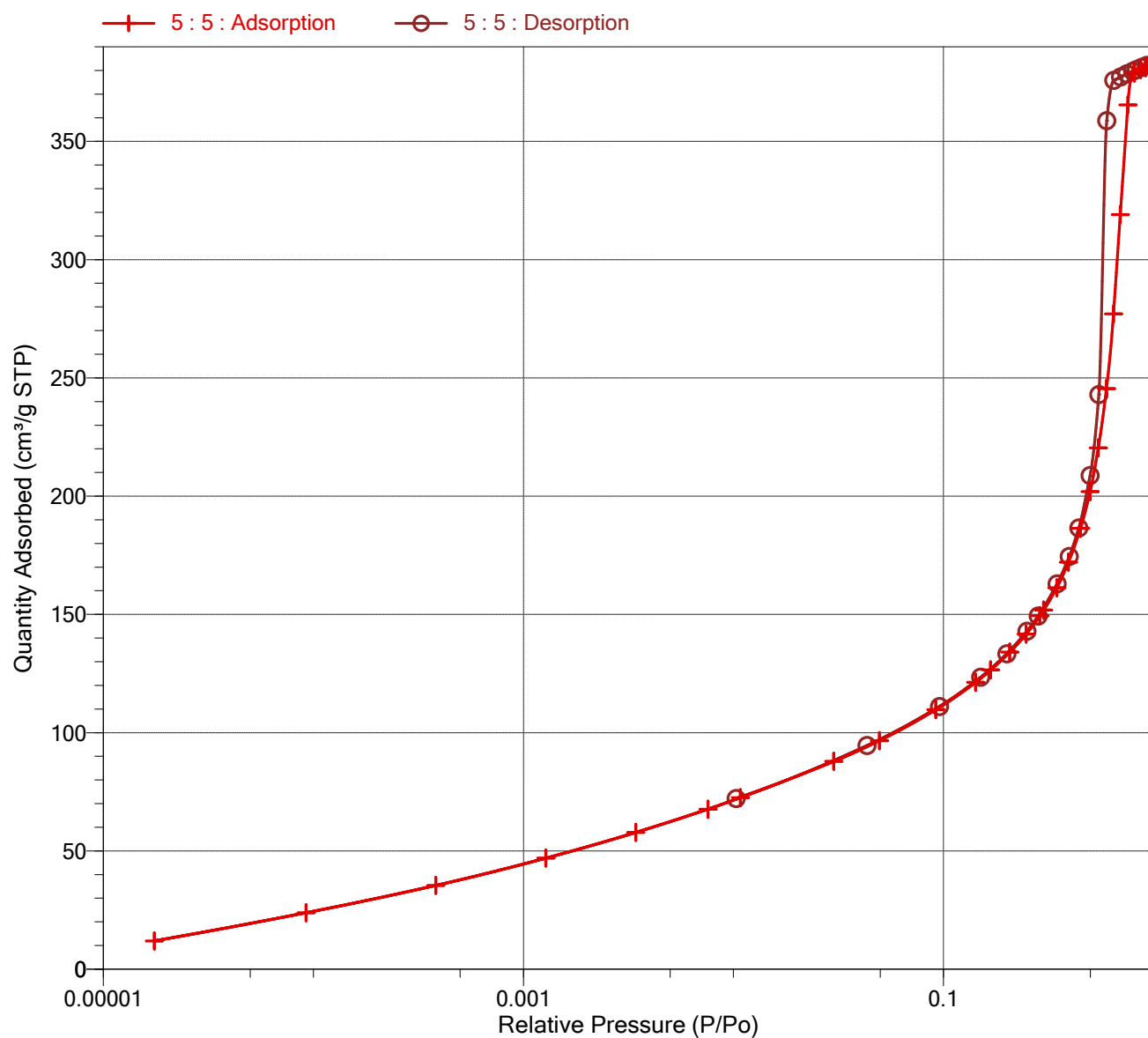


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Isotherm Log Plot

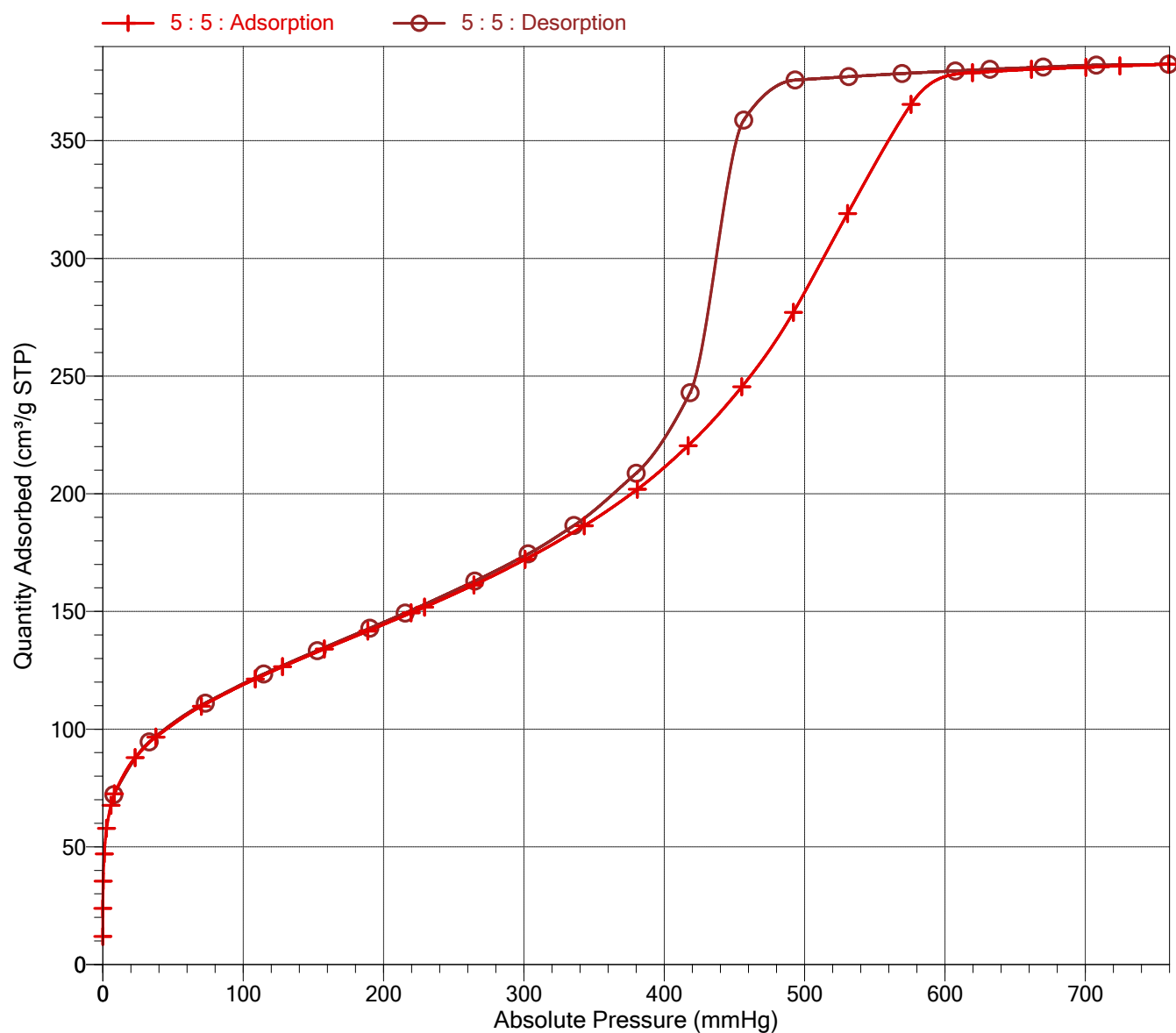


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Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Linear Absolute Plot

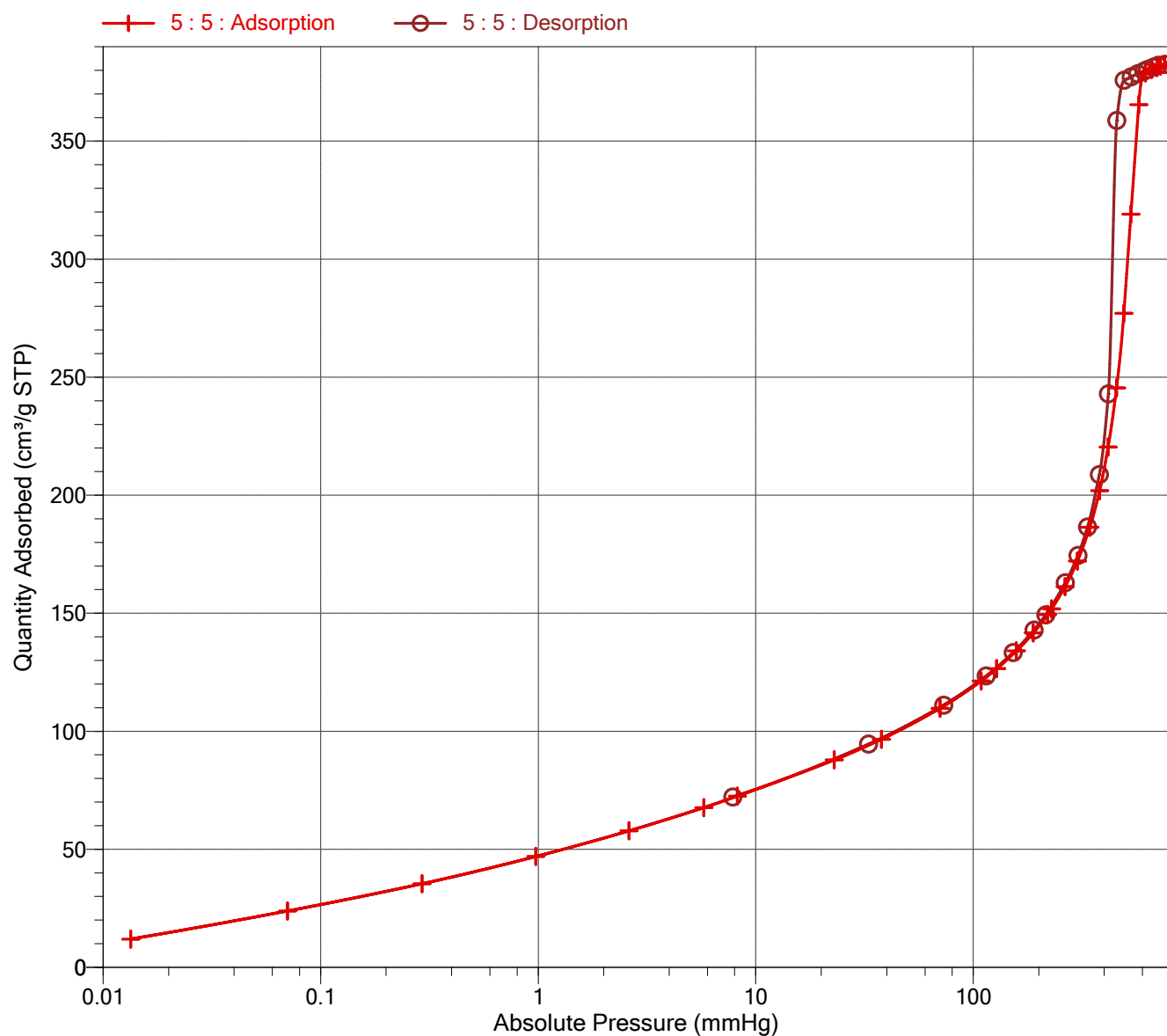


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Isotherm Log Absolute Plot

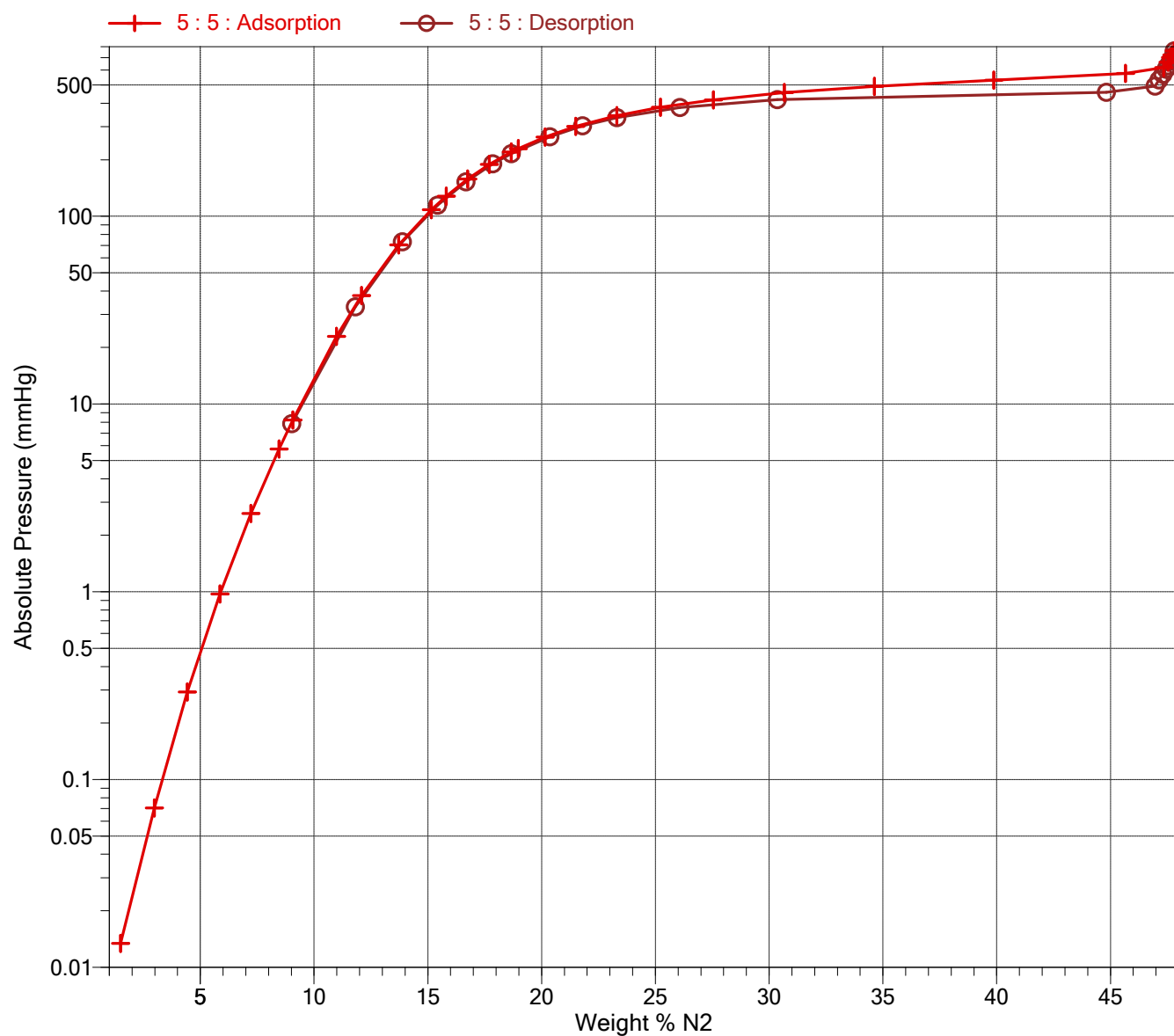


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Isotherm Pressure Composition



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Automatic degas: No	

BET Report

BET surface area: 472.9540 ± 3.3800 m²/g
Slope: 0.009134 ± 0.000064 g/cm³ STP
Y-intercept: 0.000069 ± 0.000014 g/cm³ STP
C: 134.026200
Qm: 108.6606 cm³/g STP
Correlation coefficient: 0.9998763
Molecular cross-sectional area: 0.1620 nm²

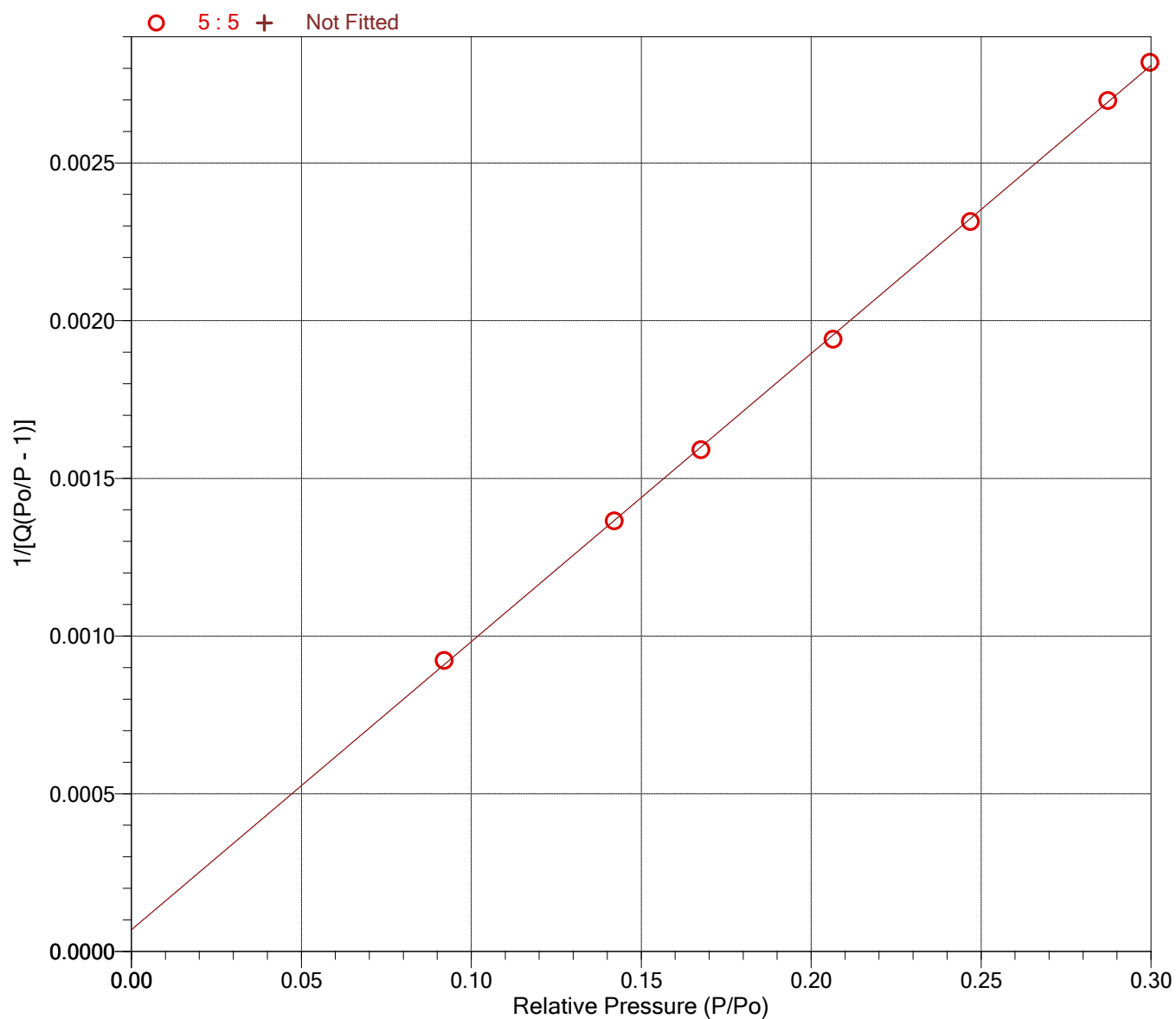
Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	1/[Q(Po/P - 1)]
0.091976337	109.7567	0.000923
0.142024542	121.2793	0.001365
0.167540859	126.4840	0.001591
0.206468413	134.0551	0.001941
0.246894147	141.6635	0.002314
0.287270725	149.3869	0.002698
0.299710406	151.8135	0.002819

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Thermal correction: No
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Sample density: 1.000 g/cm³

BET Surface Area Plot



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

Langmuir Report

Langmuir surface area: 1,724.8874 ± 192.0406 m²/g
Slope: 0.002523 ± 0.000281 g/cm³ STP
Y-intercept: 0.424 ± 0.106 g/cm³ STP·mmHg
b: 0.005950 1/mmHg
Qm: 396.2910 cm³/g STP
Correlation coefficient: 0.861597
Molecular cross-sectional area: 0.1620 nm²

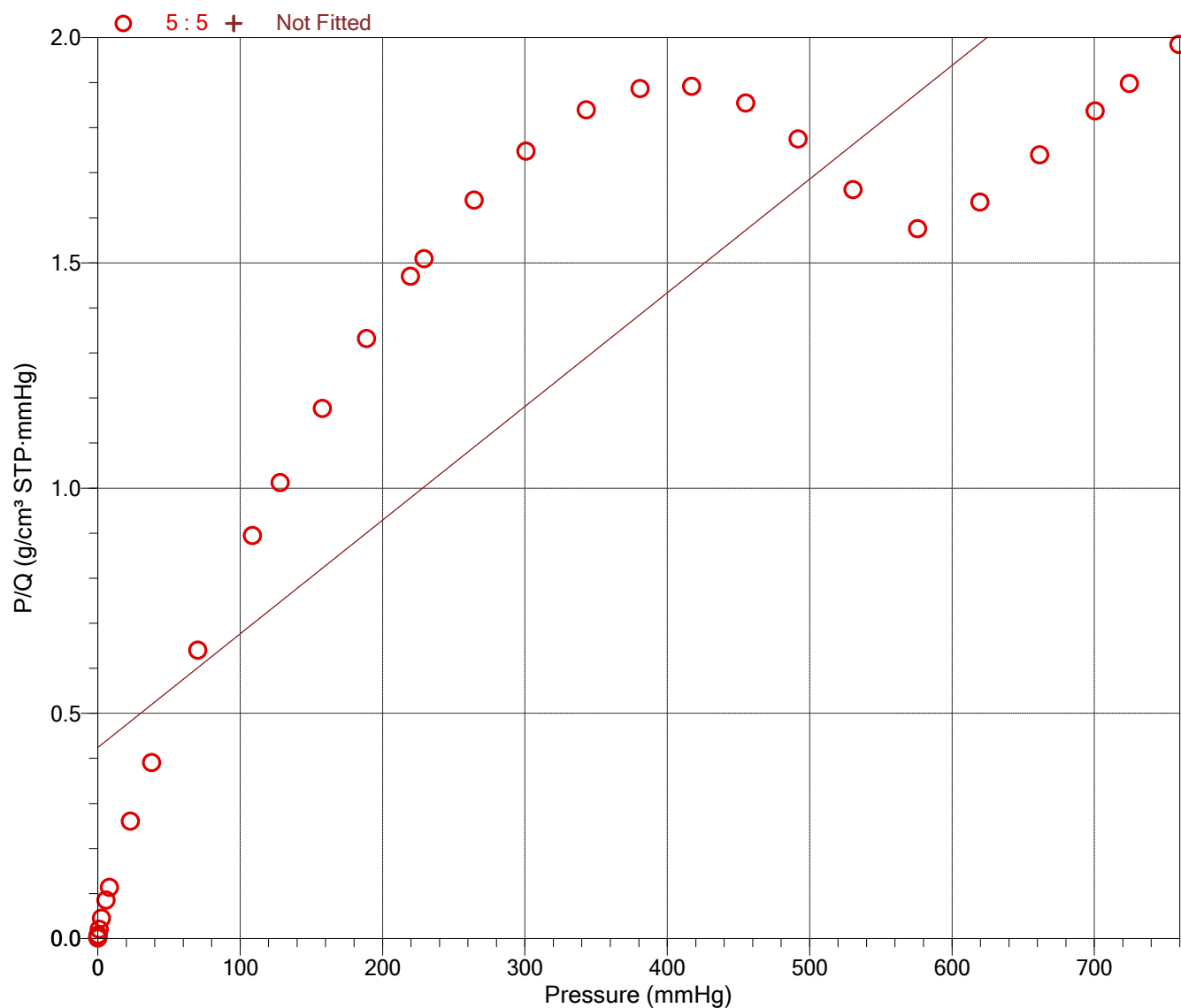
Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	P/Q (g/cm ³ STP ·mmHg)
0.013402	11.9835	0.001
0.070464	23.8704	0.003
0.292344	35.4121	0.008
0.974211	46.9455	0.021
2.614624	57.8217	0.045
5.768948	67.6670	0.085
8.233700	72.5318	0.114
22.922024	87.8490	0.261
37.792152	96.6641	0.391
70.281250	109.7567	0.640
108.547943	121.2793	0.895
128.044922	126.4840	1.012
157.805847	134.0551	1.177
188.724762	141.6635	1.332
219.631287	149.3869	1.470
229.129776	151.8135	1.509
264.420410	161.2949	1.639
300.801880	172.0877	1.748
343.066315	186.4578	1.840
380.866089	201.8707	1.887
417.068848	220.4577	1.892
455.163025	245.3981	1.855
491.966949	277.1146	1.775
530.557007	319.0723	1.663
575.858521	365.4312	1.576
619.502014	378.8678	1.635
661.587708	380.3107	1.740
700.452515	381.2053	1.837
724.603210	381.7573	1.898
759.327698	382.5058	1.985

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Langmuir Surface Area Plot



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Freundlich Tabular Report

Qm·C: 41.4024 ± 1.3762 cm³/g STP
m: 3.4863 ± 0.1833
Correlation coefficient: 0.963414

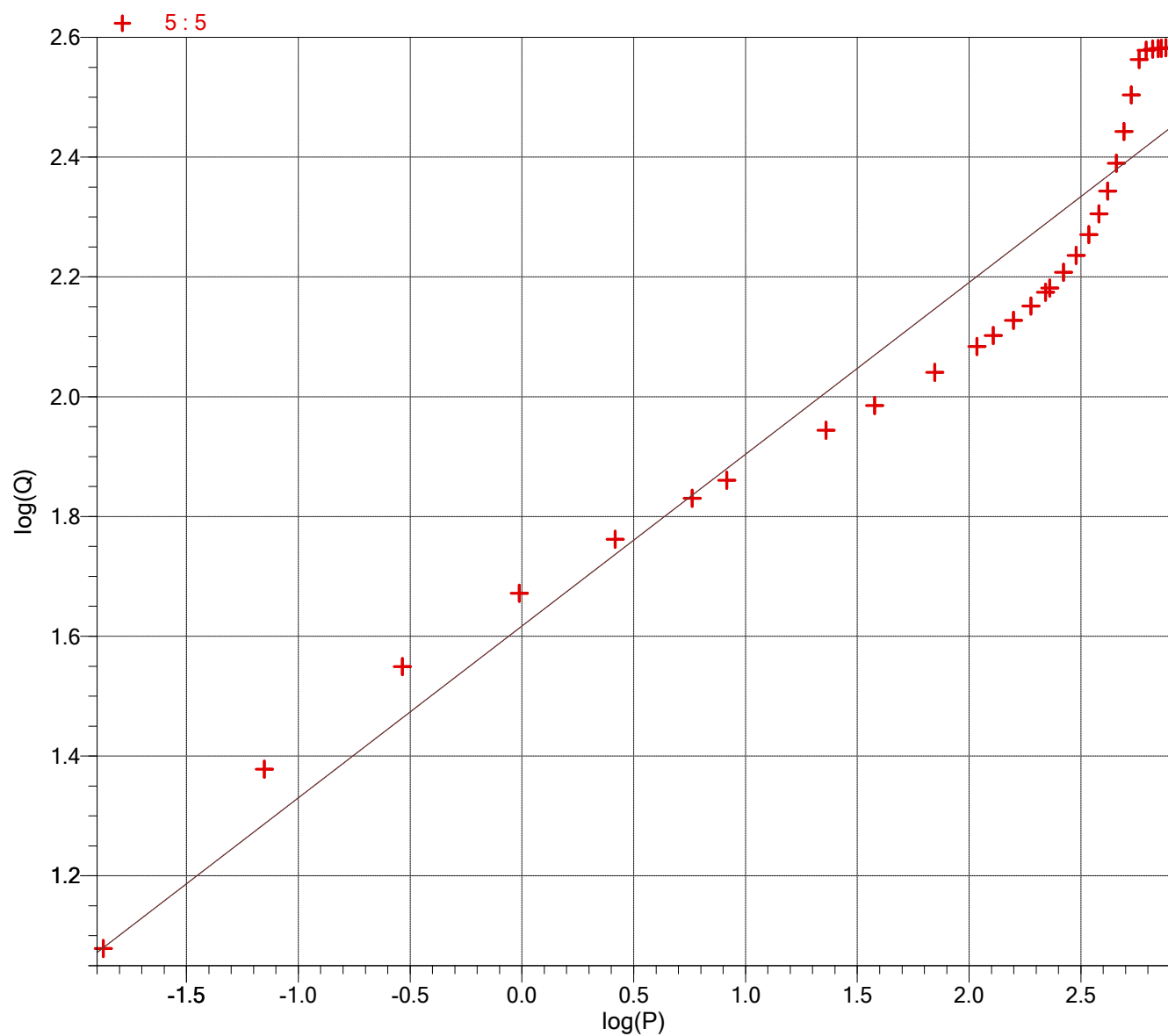
Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	log(P)	log(Q)
0.013402	11.9835	-1.87281	1.0786
0.070464	23.8704	-1.15204	1.3779
0.292344	35.4121	-0.53411	1.5492
0.974211	46.9455	-0.01135	1.6716
2.614624	57.8217	0.41741	1.7621
5.768948	67.6670	0.76110	1.8304
8.233700	72.5318	0.91560	1.8605
22.922024	87.8490	1.36025	1.9437
37.792152	96.6641	1.57740	1.9853
70.281250	109.7567	1.84684	2.0404
108.547943	121.2793	2.03562	2.0838
128.044922	126.4840	2.10736	2.1020
157.805847	134.0551	2.19812	2.1273
188.724762	141.6635	2.27583	2.1513
219.631287	149.3869	2.34169	2.1743
229.129776	151.8135	2.36008	2.1813
264.420410	161.2949	2.42229	2.2076
300.801880	172.0877	2.47828	2.2357
343.066315	186.4578	2.53538	2.2706
380.866089	201.8707	2.58077	2.3051
417.068848	220.4577	2.62021	2.3433
455.163025	245.3981	2.65817	2.3899
491.966949	277.1146	2.69194	2.4427
530.557007	319.0723	2.72473	2.5039
575.858521	365.4312	2.76032	2.5628
619.502014	378.8678	2.79204	2.5785
661.587708	380.3107	2.82059	2.5801
700.452515	381.2053	2.84538	2.5812
724.603210	381.7573	2.86010	2.5818
759.327698	382.5058	2.88043	2.5826

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Freundlich Plot



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Temkin Tabular Report

$q\text{-}\alpha/Q_m$: 0.019933 \pm 0.003056 kJ/mol·(cm³/g STP)

A: 4.5137 \pm 3.6635 mmHg

Correlation coefficient: 0.776612

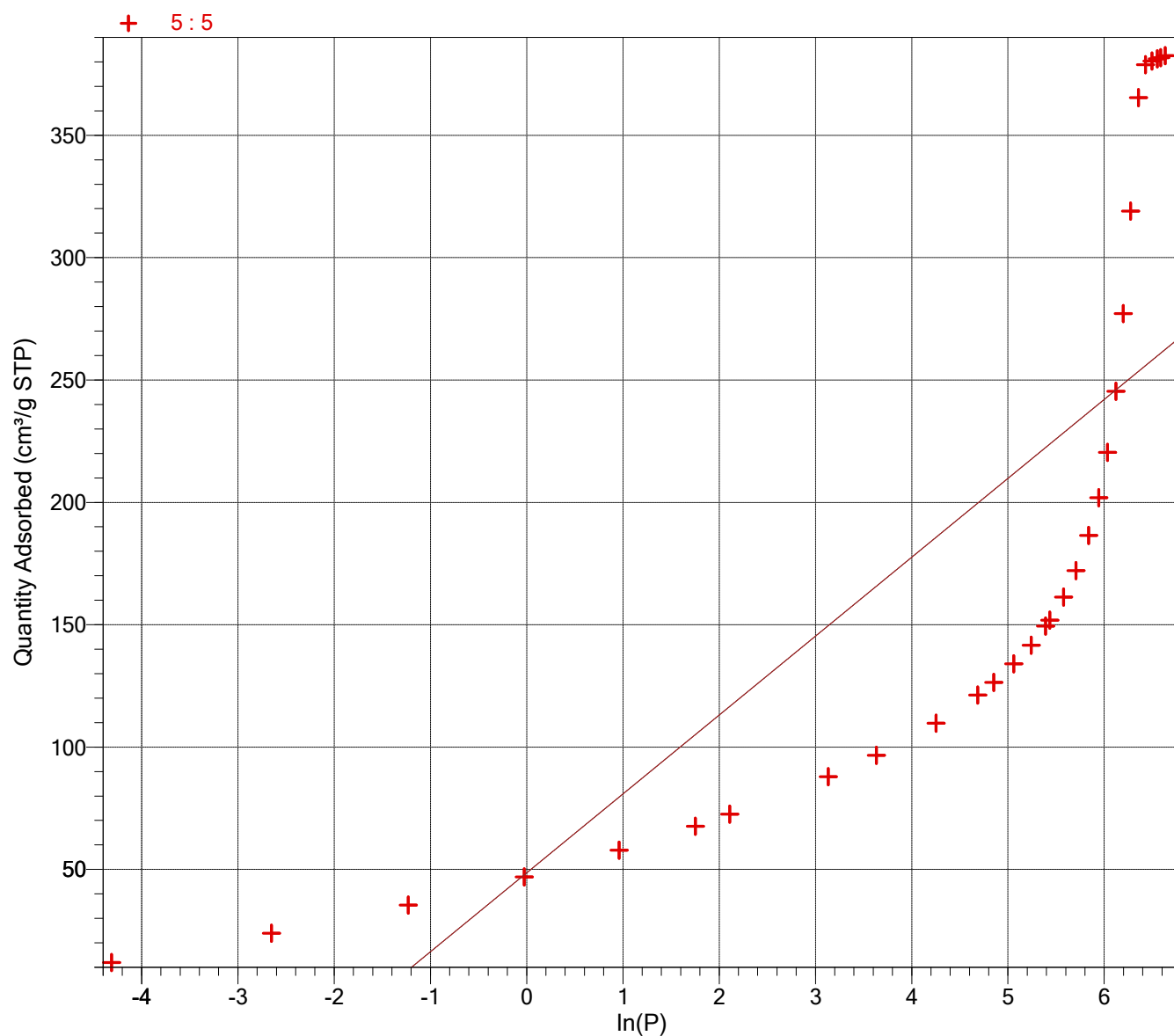
Absolute Pressure (mmHg)	Quantity Adsorbed (cm ³ /g STP)	ln(P)
0.013402	11.9835	-4.31232
0.070464	23.8704	-2.65266
0.292344	35.4121	-1.22982
0.974211	46.9455	-0.02613
2.614624	57.8217	0.96112
5.768948	67.6670	1.75249
8.233700	72.5318	2.10824
22.922024	87.8490	3.13210
37.792152	96.6641	3.63210
70.281250	109.7567	4.25251
108.547943	121.2793	4.68719
128.044922	126.4840	4.85238
157.805847	134.0551	5.06137
188.724762	141.6635	5.24029
219.631287	149.3869	5.39195
229.129776	151.8135	5.43429
264.420410	161.2949	5.57754
300.801880	172.0877	5.70645
343.066315	186.4578	5.83792
380.866089	201.8707	5.94245
417.068848	220.4577	6.03325
455.163025	245.3981	6.12066
491.966949	277.1146	6.19841
530.557007	319.0723	6.27393
575.858521	365.4312	6.35586
619.502014	378.8678	6.42892
661.587708	380.3107	6.49464
700.452515	381.2053	6.55173
724.603210	381.7573	6.58562
759.327698	382.5058	6.63243

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Temkin Plot



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

t-Plot Report

Micropore volume: 0.002118 cm³/g
Micropore area: 8.0405 m²/g
External surface area: 464.9135 m²/g
Slope: 300.564705 ± 2.030718 cm³/g·nm STP
Y-intercept: 1.368978 ± 0.876493 cm³/g STP
Correlation coefficient: 0.999909
Surface area correction factor: 1.000
Density conversion factor: 0.0015468
Total surface area (BET): 472.9540 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
0.091976337	0.36154	109.7567	*
0.142024542	0.39835	121.2793	*
0.167540859	0.41562	126.4840	*
0.206468413	0.44106	134.0551	*
0.246894147	0.46700	141.6635	*
0.287270725	0.49296	149.3869	*
0.299710406	0.50103	151.8135	
0.345874706	0.53158	161.2949	
0.393453221	0.56445	172.0877	
0.448708776	0.60514	186.4578	
0.498236163	0.64473	201.8707	
0.545788310	0.68635	220.4577	
0.595848519	0.73514	245.3981	
0.643999954	0.78833	277.1146	
0.694502271	0.85288	319.0723	

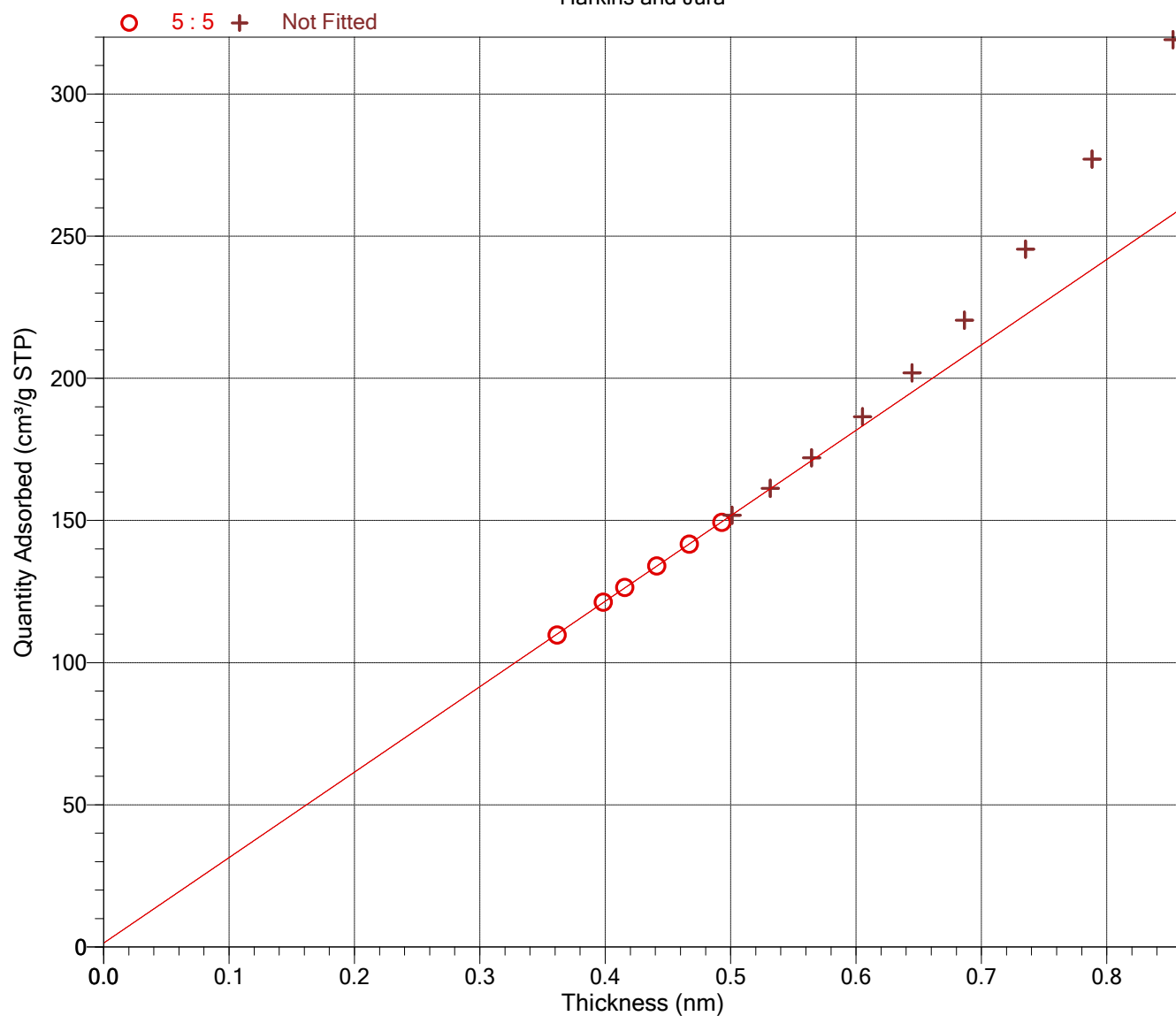
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

t-Plot

Harkins and Jura



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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)
350.1 - 39.6	43.0	0.001347	0.001347	0.125	0.125
39.6 - 24.9	28.9	0.001022	0.002370	0.142	0.267
24.9 - 15.7	18.2	0.001776	0.004146	0.391	0.658
15.7 - 11.2	12.7	0.003092	0.007237	0.975	1.633
11.2 - 8.6	9.6	0.032025	0.039263	13.385	15.017
8.6 - 6.9	7.6	0.117509	0.156771	62.014	77.031
6.9 - 5.9	6.3	0.108122	0.264893	68.348	145.379
5.9 - 5.2	5.5	0.080398	0.345291	58.789	204.168
5.2 - 4.5	4.8	0.060498	0.405789	50.539	254.708
4.5 - 4.0	4.2	0.042262	0.448052	39.877	294.584
4.0 - 3.6	3.8	0.031855	0.479907	33.732	328.316
3.6 - 3.2	3.4	0.026681	0.506588	31.858	360.174
3.2 - 2.9	3.0	0.017698	0.524286	23.631	383.805
2.9 - 2.6	2.7	0.013593	0.537879	20.104	403.909
2.6 - 2.5	2.5	0.003122	0.541001	4.902	408.811
2.5 - 2.3	2.4	0.009413	0.550414	15.732	424.543
2.3 - 2.1	2.2	0.008341	0.558755	15.293	439.836
2.1 - 1.9	2.0	0.008038	0.566792	16.215	456.051
1.9 - 1.8	1.8	0.005333	0.572125	11.654	467.705

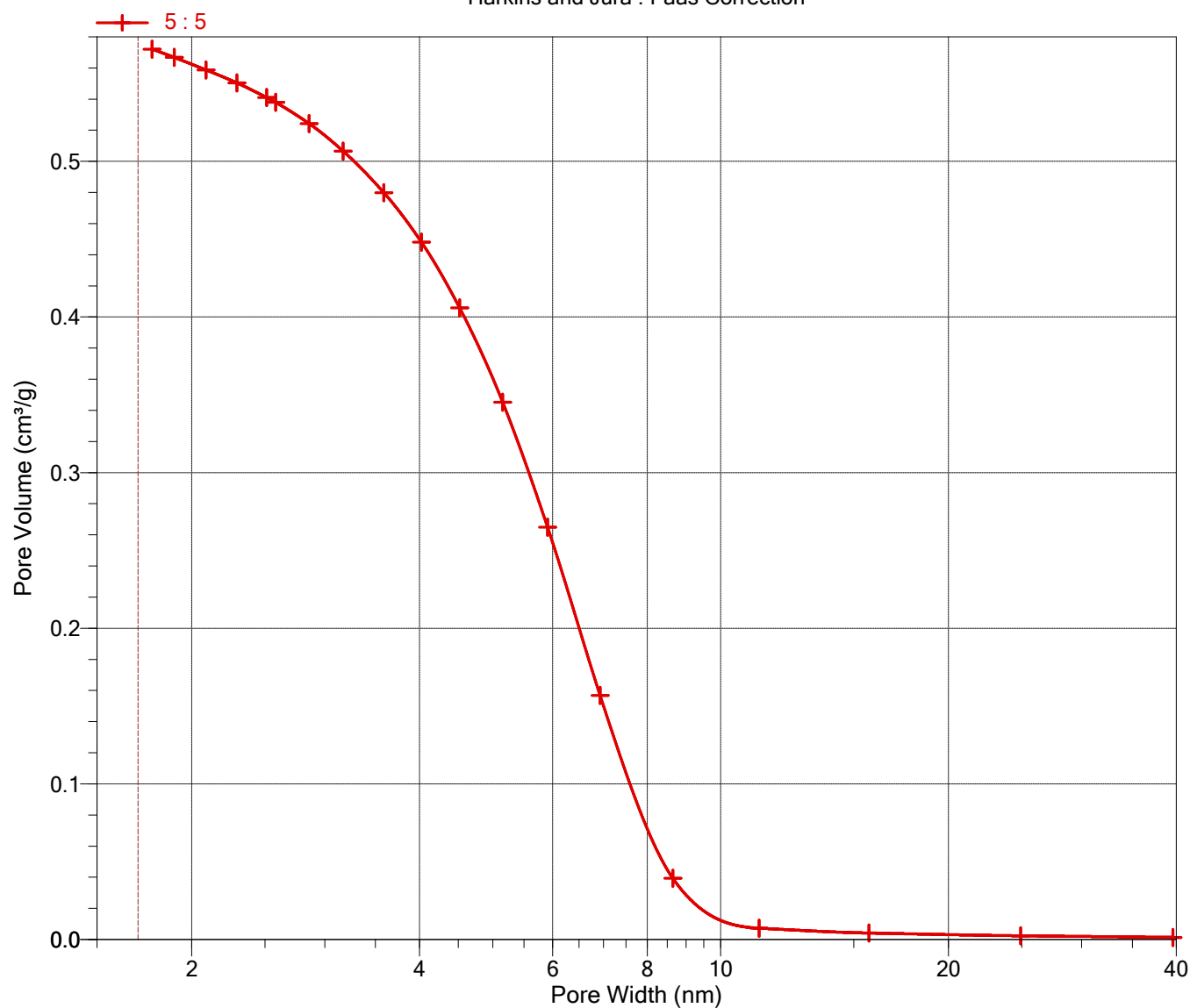
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Adsorption Cumulative Pore Volume (Larger)

Harkins and Jura : Faas Correction



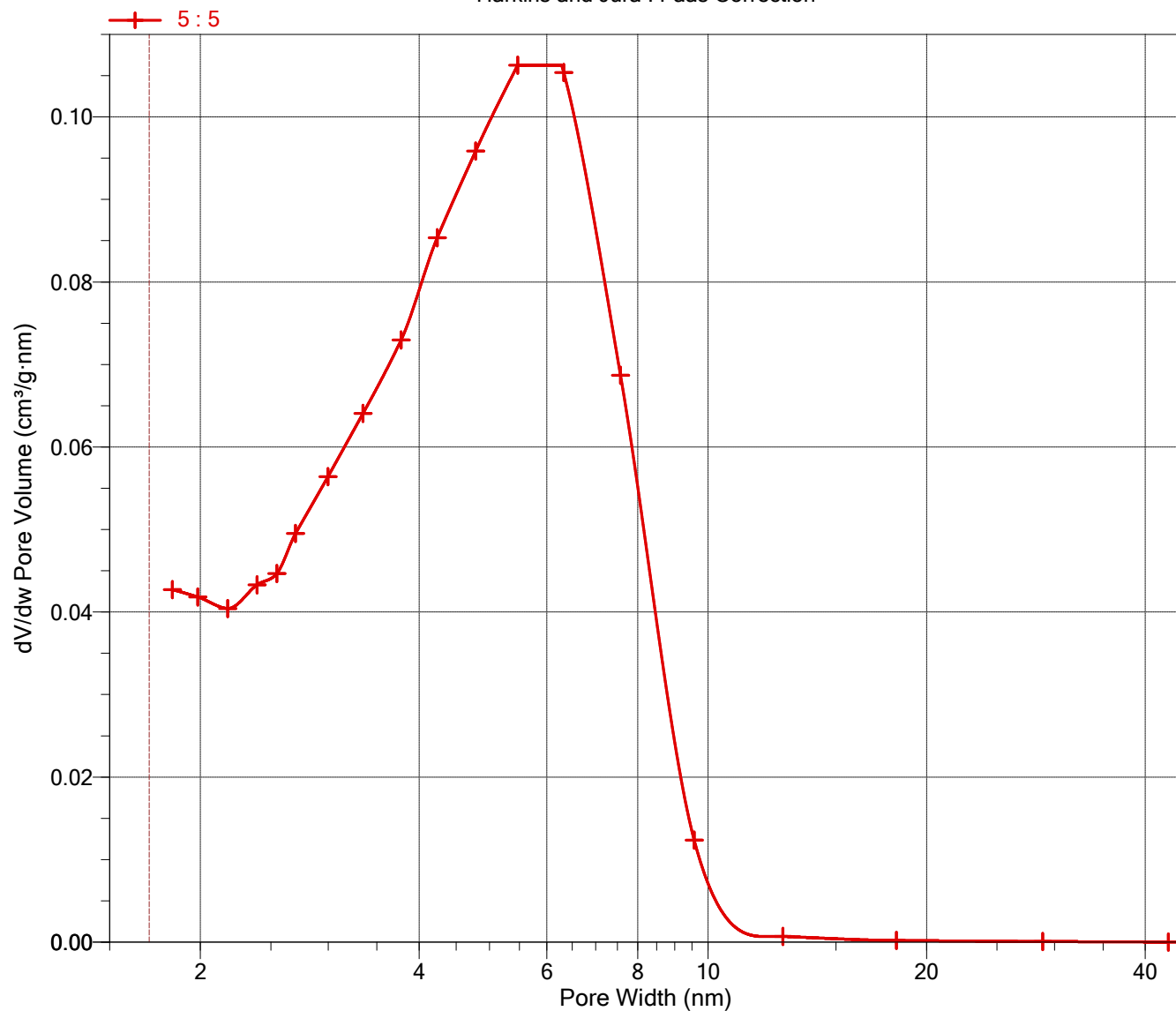
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Adsorption dV/dw Pore Volume

Harkins and Jura : Faas Correction



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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)
350.2 - 28.2	29.9	0.000770	0.000770	0.103	0.103
28.2 - 17.2	20.0	0.001672	0.002442	0.335	0.438
17.2 - 12.4	13.9	0.001909	0.004351	0.548	0.986
12.4 - 10.5	11.2	0.001527	0.005878	0.544	1.530
10.5 - 8.4	9.2	0.002651	0.008528	1.152	2.682
8.4 - 7.0	7.6	0.003189	0.011718	1.679	4.360
7.0 - 6.0	6.4	0.003627	0.015344	2.253	6.614
6.0 - 5.3	5.6	0.049953	0.065297	35.834	42.447
5.3 - 4.6	4.9	0.358234	0.423531	293.064	335.511
4.6 - 4.1	4.3	0.090093	0.513624	83.419	418.930
4.1 - 3.6	3.8	0.045650	0.559275	48.018	466.948
3.6 - 3.3	3.4	0.018704	0.577978	21.932	488.880
3.3 - 2.9	3.1	0.013151	0.591130	17.063	505.943
2.9 - 2.6	2.7	0.011884	0.603014	17.505	523.447
2.6 - 2.4	2.5	0.004194	0.607208	6.818	530.265
2.4 - 2.1	2.2	0.004885	0.612093	8.734	539.000
2.1 - 1.9	2.0	0.004358	0.616451	8.772	547.772

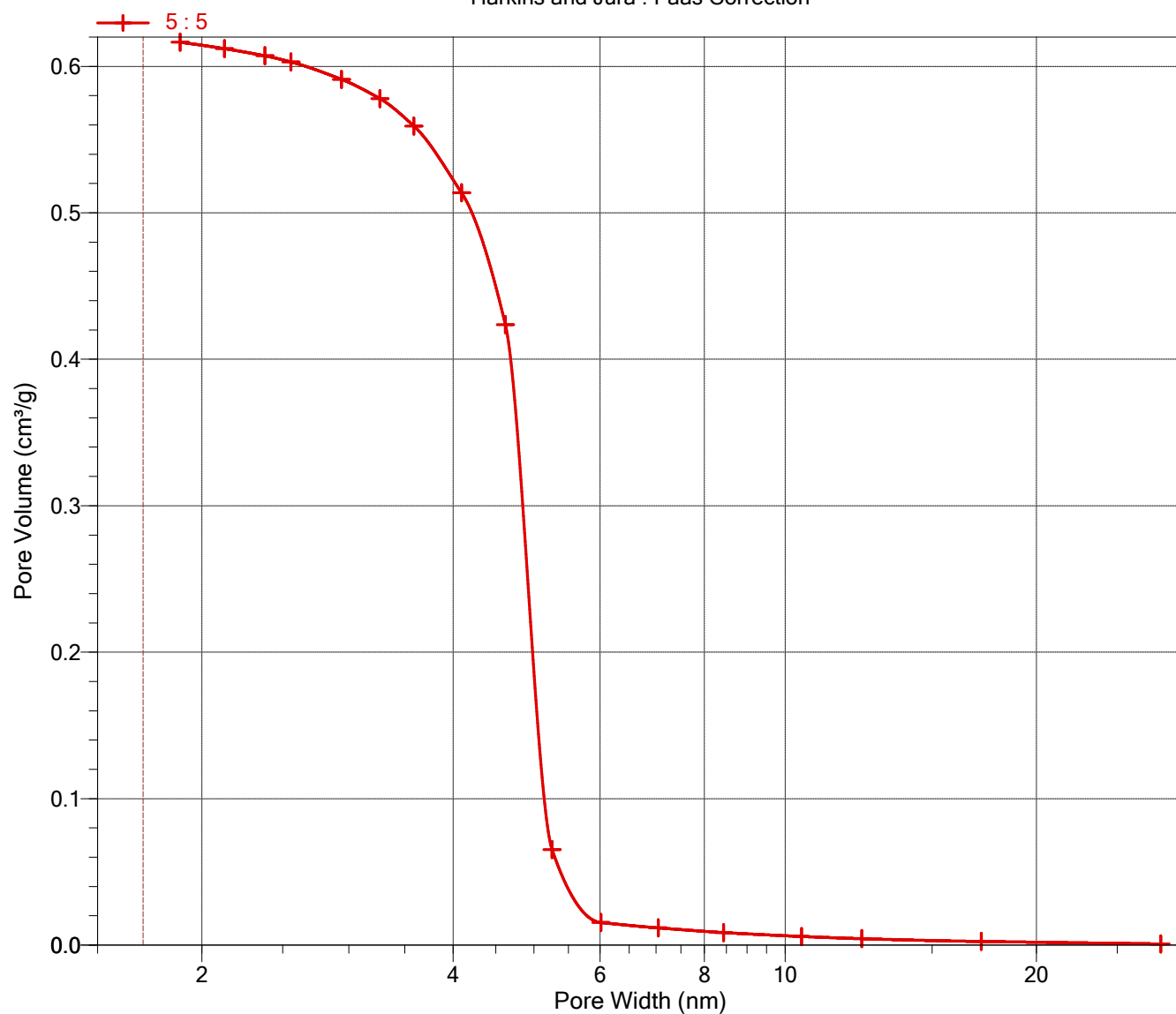
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Desorption Cumulative Pore Volume (Larger)

Harkins and Jura : Faas Correction



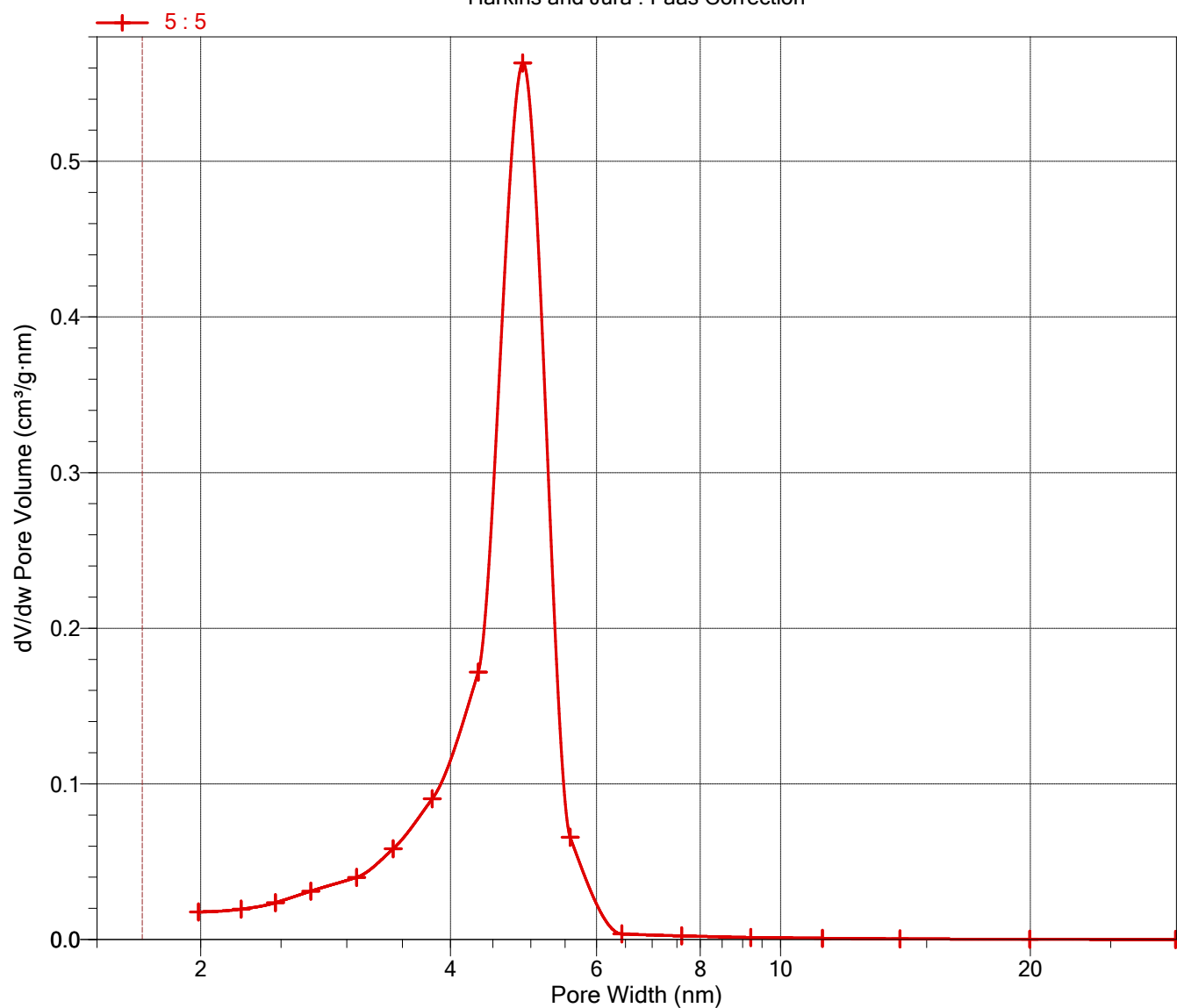
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

BJH Desorption dV/dw Pore Volume

Harkins and Jura : Faas Correction



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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)
350.1 - 39.6	194.8	0.001191	0.001191	0.024	0.024
39.6 - 24.9	32.2	0.001007	0.002198	0.125	0.149
24.9 - 15.7	20.3	0.001710	0.003908	0.337	0.486
15.7 - 11.2	13.5	0.002974	0.006882	0.883	1.369
11.2 - 8.6	9.9	0.030613	0.037495	12.316	13.685
8.6 - 6.9	7.8	0.112401	0.149896	57.719	71.404
6.9 - 5.9	6.4	0.104738	0.254634	65.248	136.652
5.9 - 5.2	5.5	0.078322	0.332956	56.656	193.308
5.2 - 4.5	4.8	0.059095	0.392051	48.880	242.187
4.5 - 4.0	4.3	0.041585	0.433637	38.930	281.117
4.0 - 3.6	3.8	0.031501	0.465137	33.098	314.215
3.6 - 3.2	3.4	0.026439	0.491576	31.284	345.499
3.2 - 2.9	3.0	0.017832	0.509408	23.655	369.154
2.9 - 2.6	2.7	0.013853	0.523261	20.364	389.518
2.6 - 2.5	2.5	0.003324	0.526585	5.217	394.734
2.5 - 2.3	2.4	0.009769	0.536354	16.246	410.980
2.3 - 2.1	2.2	0.008717	0.545071	15.896	426.876
2.1 - 1.9	2.0	0.008392	0.553462	16.832	443.708
1.9 - 1.8	1.8	0.005674	0.559136	12.364	456.072

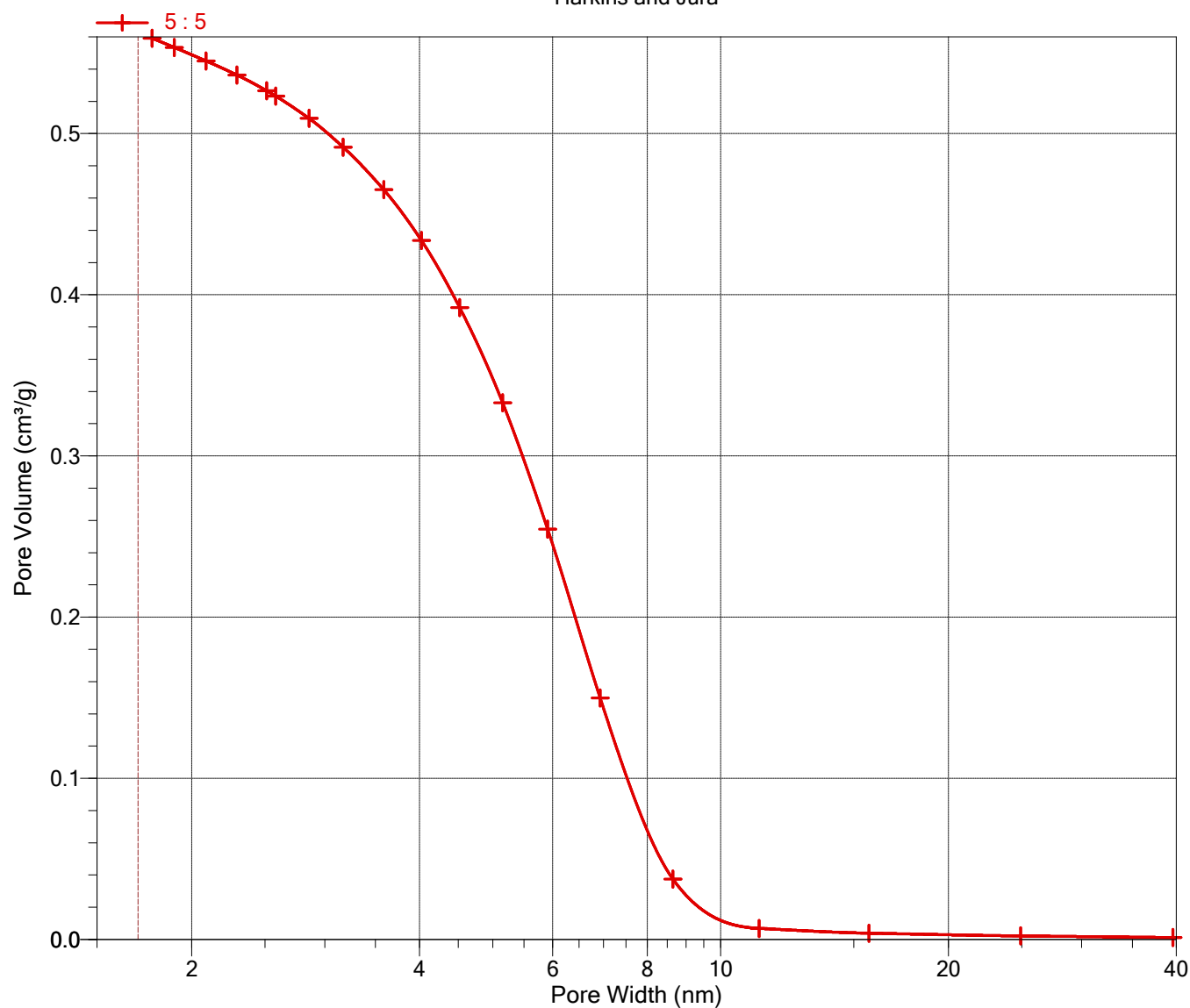
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Adsorption Cumulative Pore Volume (Larger)

Harkins and Jura



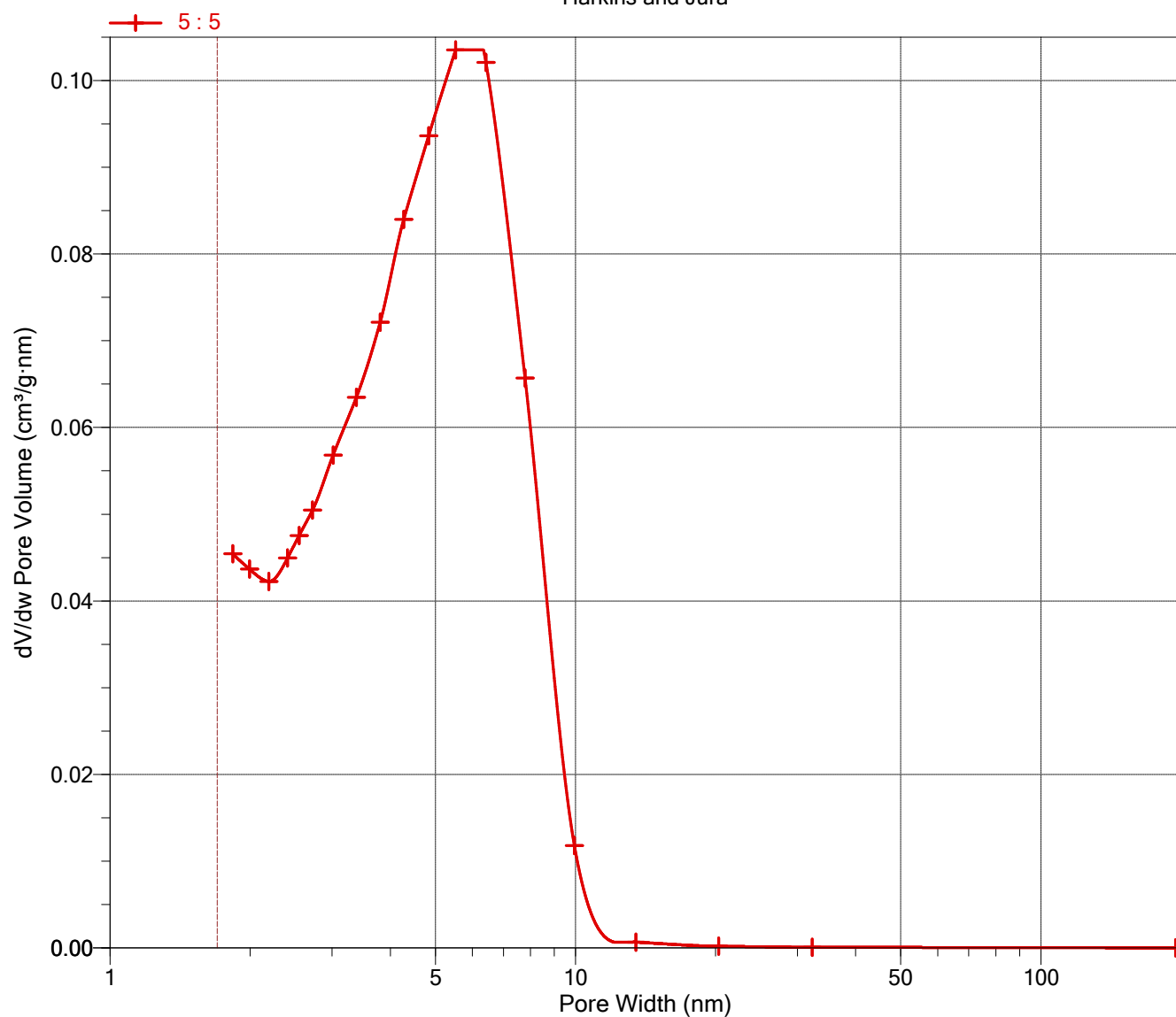
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Adsorption dV/dw Pore Volume

Harkins and Jura



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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)
350.1 - 28.1	189.1	0.000641	0.000641	0.014	0.014
28.1 - 17.1	22.6	0.001593	0.002234	0.282	0.295
17.1 - 12.3	14.7	0.001832	0.004066	0.499	0.794
12.3 - 10.4	11.3	0.001491	0.005557	0.526	1.320
10.4 - 8.4	9.4	0.002538	0.008095	1.082	2.402
8.4 - 7.0	7.7	0.003046	0.011141	1.589	3.991
7.0 - 5.9	6.5	0.003454	0.014595	2.138	6.129
5.9 - 5.2	5.6	0.047126	0.061721	33.869	39.998
5.2 - 4.5	4.9	0.335942	0.397662	276.064	316.062
4.5 - 4.0	4.3	0.084916	0.482579	79.224	395.286
4.0 - 3.5	3.8	0.043181	0.525759	45.784	441.070
3.5 - 3.2	3.4	0.018268	0.544027	21.752	462.822
3.2 - 2.9	3.0	0.013087	0.557114	17.252	480.074
2.9 - 2.5	2.7	0.011921	0.569035	17.802	497.876
2.5 - 2.3	2.4	0.004550	0.573585	7.588	505.464
2.3 - 2.1	2.2	0.005378	0.578964	9.848	515.312
2.1 - 1.8	1.9	0.004876	0.583839	10.071	525.383

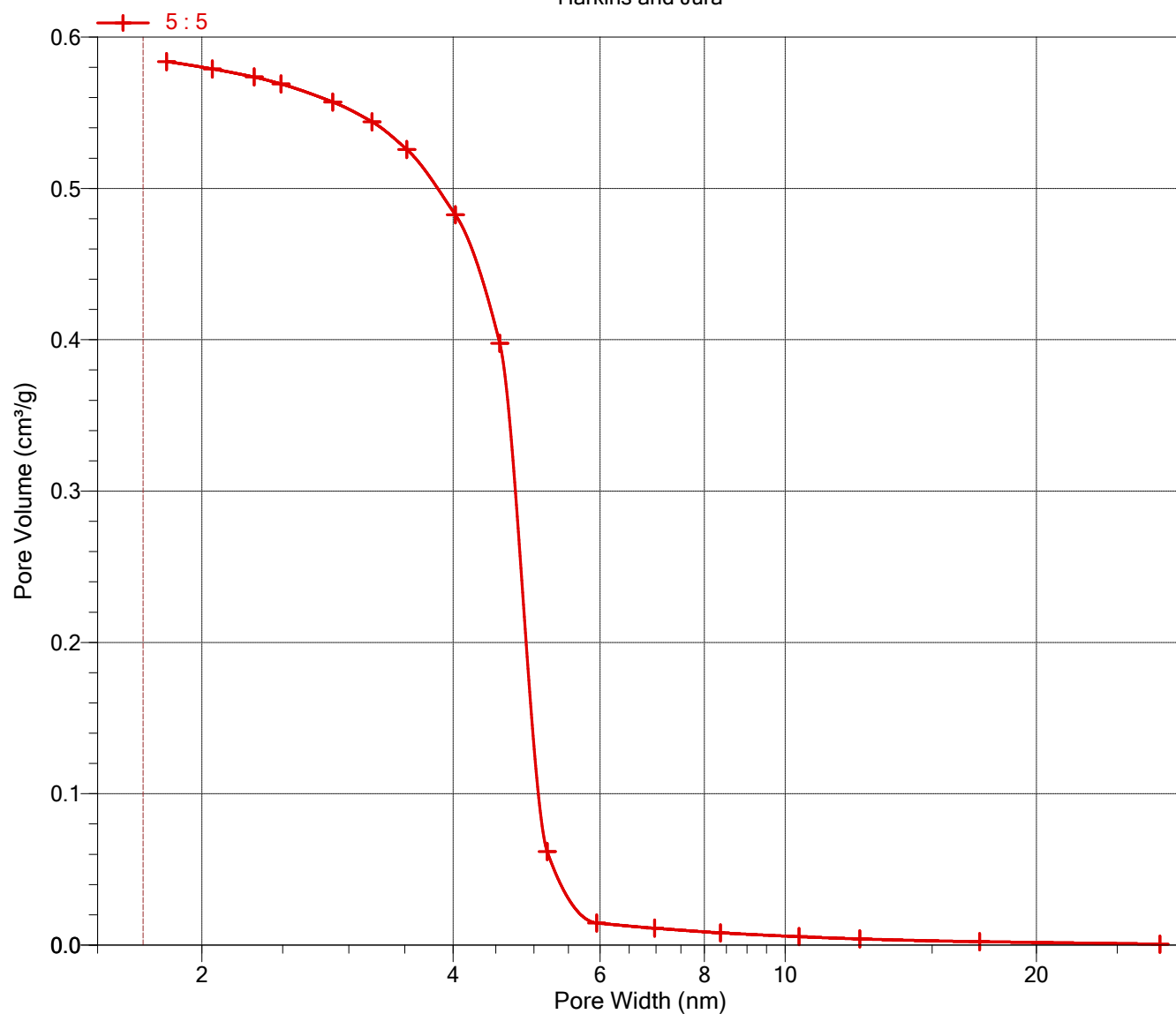
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Desorption Cumulative Pore Volume (Larger)

Harkins and Jura



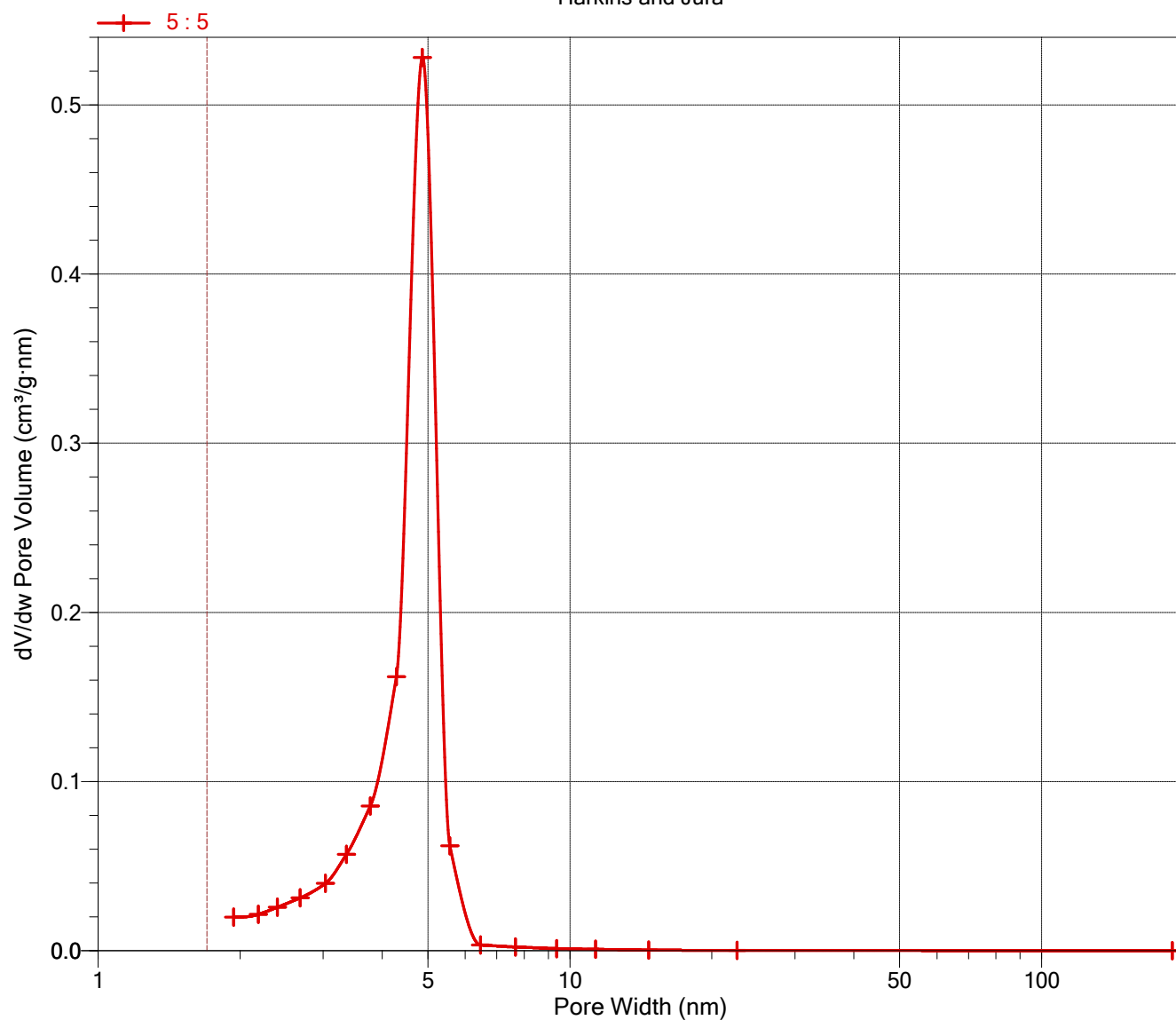
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dollimore-Heal Desorption dV/dw Pore Volume

Harkins and Jura



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Horvath-Kawazoe Report

Slit Pore Geometry (Original H-K)

Maximum pore volume: 0.195645 cm³/g
at Relative Pressure: 0.167540859
Median pore width: 0.7065 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)
0.01340	0.000017519	11.98352	0.423	0.0185	0.0438
0.07046	0.000092203	23.87041	0.475	0.0369	0.3560
0.29234	0.000382980	35.41210	0.532	0.0548	0.3126
0.97421	0.001276679	46.94546	0.595	0.0726	0.2796
2.61462	0.003427079	57.82172	0.665	0.0894	0.2411
5.76895	0.007560207	67.66701	0.739	0.1047	0.2055
8.23370	0.010781745	72.53184	0.780	0.1122	0.1835
22.92202	0.030008793	87.84898	0.941	0.1359	0.1471
37.79215	0.049470828	96.66412	1.058	0.1495	0.1172
70.28125	0.091976337	109.75672	1.267	0.1698	0.0967
108.54794	0.142024542	121.27927	1.491	0.1876	0.0798
128.04492	0.167540859	126.48398	1.604	0.1956	0.0712

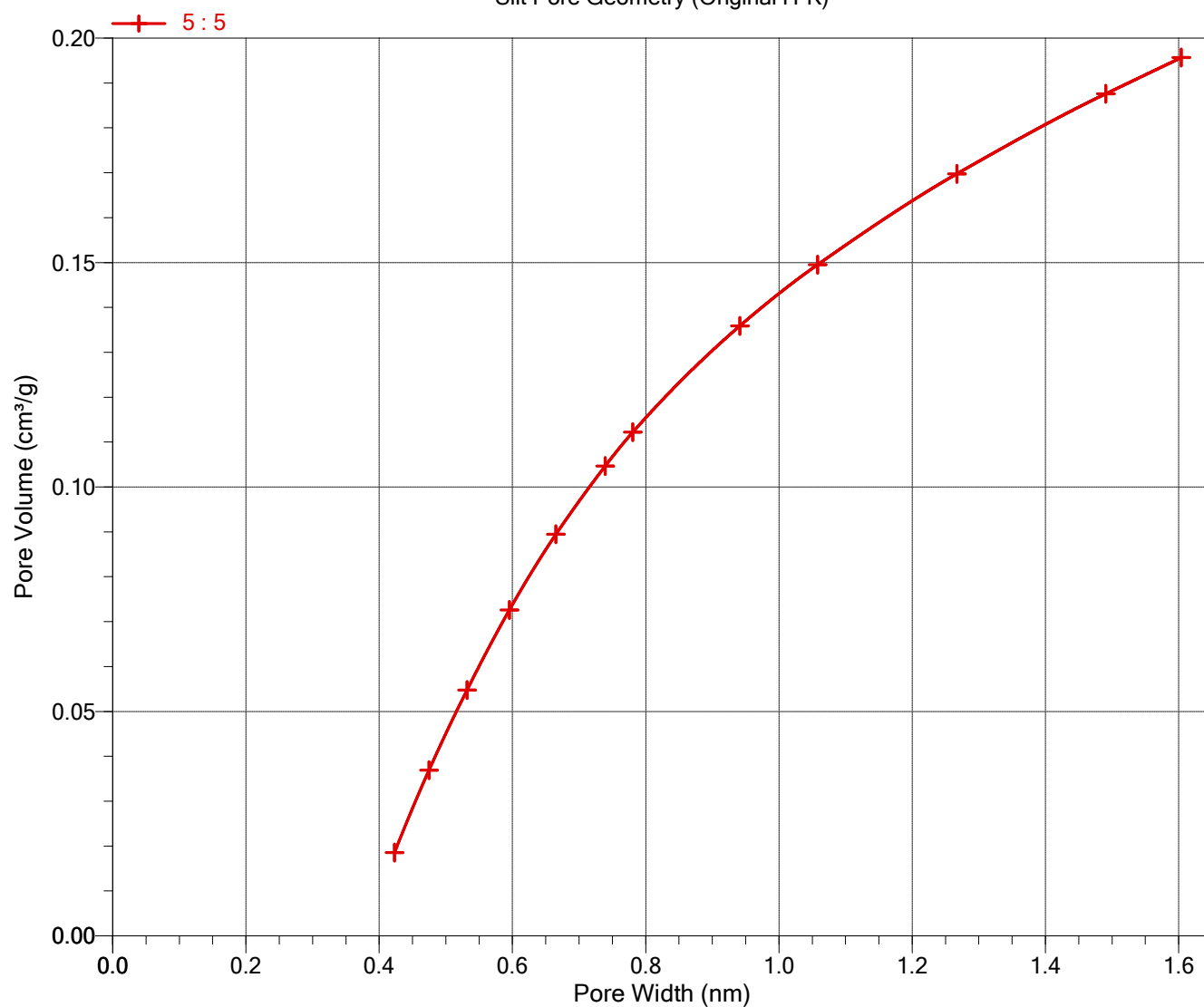
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Horvath-Kawazoe Cumulative Pore Volume Plot

Slit Pore Geometry (Original H-K)



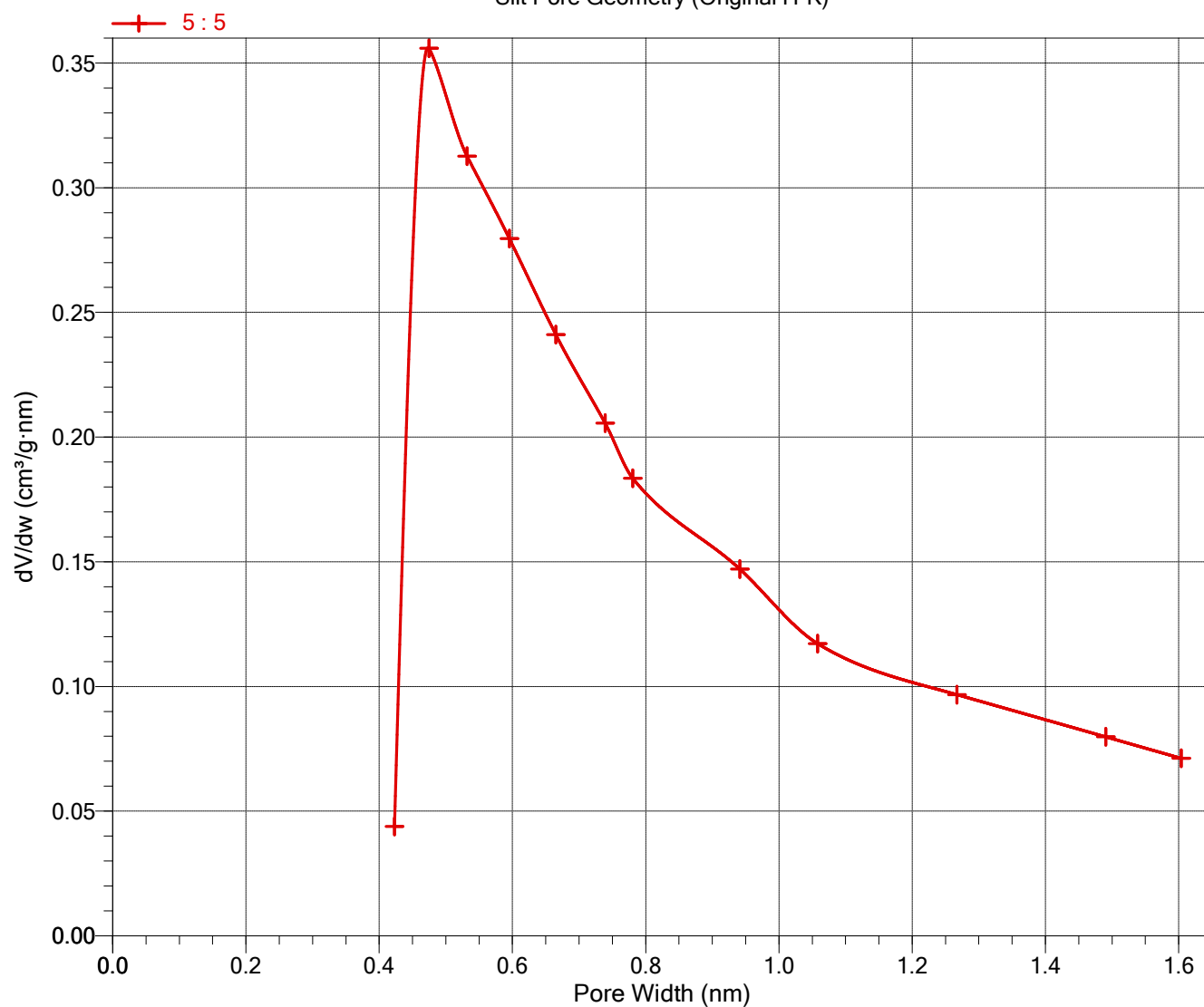
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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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: 28.1681 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: 2.40702 cm³/g STP

Volume in Pores	<	0.804 nm	:	0.00953 cm ³ /g
Total Volume in Pores	<=	233.913 nm	:	0.55168 cm ³ /g
Area in Pores	>	233.913 nm	:	0.000 m ² /g
Total Area in Pores	>=	0.804 nm	:	269.676 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	0.00953	0.00000	0.000	0.000
0.858	0.00953	0.00000	0.000	0.000
0.929	0.00953	0.00000	0.000	0.000
1.001	0.00953	0.00000	0.000	0.000
1.090	0.00953	0.00000	0.000	0.000
1.179	0.00953	0.00000	0.000	0.000
1.269	0.01654	0.00700	11.037	11.037
1.358	0.03497	0.01843	38.174	27.137
1.483	0.04820	0.01323	56.018	17.844
1.591	0.05806	0.00986	68.418	12.400
1.716	0.06459	0.00653	76.029	7.612
1.859	0.06677	0.00218	78.380	2.351
2.002	0.06677	0.00000	78.380	0.000
2.162	0.06677	0.00000	78.380	0.000
2.341	0.07082	0.00405	81.837	3.456
2.520	0.07815	0.00733	87.653	5.816
2.734	0.08905	0.01090	95.625	7.972
2.949	0.09932	0.01027	102.592	6.968
3.181	0.11081	0.01149	109.817	7.225
3.431	0.12618	0.01537	118.775	8.958
3.699	0.14176	0.01558	127.201	8.426
4.003	0.16200	0.02024	137.311	10.110
4.325	0.18813	0.02613	149.396	12.085
4.664	0.22202	0.03388	163.926	14.529
5.040	0.26245	0.04043	179.972	16.046
5.433	0.31085	0.04840	197.790	17.818
5.880	0.36839	0.05754	217.364	19.574
6.344	0.42608	0.05769	235.551	18.187
6.845	0.47850	0.05241	250.865	15.315
7.399	0.51429	0.03579	260.541	9.676
7.988	0.53997	0.02568	266.970	6.429
8.632	0.55123	0.01126	269.579	2.609
9.311	0.55168	0.00045	269.676	0.097
10.061	0.55168	0.00000	269.676	0.000
10.866	0.55168	0.00000	269.676	0.000
11.723	0.55168	0.00000	269.676	0.000
12.653	0.55168	0.00000	269.676	0.000

Sample: 5
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Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 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	0.55168	0.00000	269.676	0.000
14.761	0.55168	0.00000	269.676	0.000
15.941	0.55168	0.00000	269.676	0.000
17.210	0.55168	0.00000	269.676	0.000
18.586	0.55168	0.00000	269.676	0.000
20.069	0.55168	0.00000	269.676	0.000
21.660	0.55168	0.00000	269.676	0.000
23.393	0.55168	0.00000	269.676	0.000
25.252	0.55168	0.00000	269.676	0.000
27.271	0.55168	0.00000	269.676	0.000
29.451	0.55168	0.00000	269.676	0.000
31.792	0.55168	0.00000	269.676	0.000
34.330	0.55168	0.00000	269.676	0.000
37.064	0.55168	0.00000	269.676	0.000
40.031	0.55168	0.00000	269.676	0.000
43.230	0.55168	0.00000	269.676	0.000
46.679	0.55168	0.00000	269.676	0.000
50.396	0.55168	0.00000	269.676	0.000
54.417	0.55168	0.00000	269.676	0.000
58.760	0.55168	0.00000	269.676	0.000
63.442	0.55168	0.00000	269.676	0.000
68.499	0.55168	0.00000	269.676	0.000
73.968	0.55168	0.00000	269.676	0.000
79.865	0.55168	0.00000	269.676	0.000
86.245	0.55168	0.00000	269.676	0.000
93.126	0.55168	0.00000	269.676	0.000
100.560	0.55168	0.00000	269.676	0.000
108.566	0.55168	0.00000	269.676	0.000
117.233	0.55168	0.00000	269.676	0.000
126.580	0.55168	0.00000	269.676	0.000
136.677	0.55168	0.00000	269.676	0.000
147.596	0.55168	0.00000	269.676	0.000
159.355	0.55168	0.00000	269.676	0.000
172.079	0.55168	0.00000	269.676	0.000
185.804	0.55168	0.00000	269.676	0.000
200.619	0.55168	0.00000	269.676	0.000
216.632	0.55168	0.00000	269.676	0.000
233.913	0.55168	0.00000	269.676	0.000

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

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Thermal correction: No
Ambient free space: 28.1681 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: 2.40702 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
0.000026102	13.8365	9.2373	4.5992	0.332393
0.000042841	17.2284	11.1367	6.0916	0.353582
0.000068697	21.5092	14.3341	7.1752	0.333585
0.000107744	24.8117	19.5782	5.2334	0.210927
0.000165451	28.0217	26.6907	1.3311	0.047501
0.000249000	31.8017	33.6689	-1.8672	-0.058714
0.000367617	35.1656	39.3279	-4.1623	-0.118364
0.000532902	37.6677	43.7916	-6.1240	-0.162578
0.000759152	41.1291	47.3953	-6.2662	-0.152353
0.001063641	45.1417	50.3898	-5.2481	-0.116257
0.001466847	48.0568	52.9442	-4.8873	-0.101699
0.001992604	51.1764	55.1758	-3.9994	-0.078150
0.002668156	54.8720	57.1719	-2.2999	-0.041913
0.003524104	58.0791	59.0051	-0.9260	-0.015943
0.004594232	60.9256	60.7553	0.1703	0.002794
0.005915212	64.2644	63.3519	0.9125	0.014200
0.007526182	67.6091	65.2738	2.3353	0.034541
0.009468212	70.8423	71.4020	-0.5597	-0.007901
0.011783670	73.5257	73.2612	0.2646	0.003599
0.014515520	76.1623	74.9878	1.1745	0.015421
0.017706521	79.0762	80.0884	-1.0123	-0.012801
0.021398440	82.1690	81.8322	0.3368	0.004099
0.025631230	85.2628	83.5920	1.6708	0.019596
0.030442240	88.0705	87.9186	0.1519	0.001725
0.035865448	90.8134	89.8160	0.9974	0.010983
0.041930798	93.6871	93.7370	-0.0499	-0.000533
0.048663601	96.3880	95.8545	0.5335	0.005535
0.056084011	98.8845	98.7757	0.1088	0.001100
0.064206667	101.5911	101.2741	0.3170	0.003120
0.073040441	104.4326	103.9872	0.4454	0.004265
0.082588248	107.2835	106.8699	0.4136	0.003855
0.092847057	109.9676	109.8203	0.1472	0.001339
0.103808001	112.6130	112.7203	-0.1073	-0.000952
0.115456402	115.3783	115.4841	-0.1058	-0.000917
0.127772301	118.2032	118.0760	0.1272	0.001076
0.140730694	121.0105	120.4972	0.5133	0.004242
0.154301897	123.8164	123.9838	-0.1673	-0.001351
0.168452203	126.6629	126.1162	0.5467	0.004316
0.183144197	129.5468	130.4387	-0.8919	-0.006885
0.198337302	132.5003	132.3810	0.1193	0.000901
0.213988706	135.4760	134.2722	1.2038	0.008886

Sample: 5
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Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 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
0.230053306	138.4892	139.6869	-1.1977	-0.008648
0.246484801	141.5857	141.5143	0.0714	0.000504
0.263235897	144.7793	143.3504	1.4289	0.009869
0.280259013	148.0403	148.6384	-0.5980	-0.004040
0.297506303	151.3803	150.5169	0.8633	0.005703
0.314930797	154.8624	156.4257	-1.5633	-0.010095
0.332486212	158.4866	158.4016	0.0850	0.000536
0.350127310	162.1984	160.4632	1.7352	0.010698
0.367810607	166.1130	168.0045	-1.8915	-0.011387
0.385494202	170.2099	170.1580	0.0519	0.000305
0.403138310	174.4312	172.3610	2.0702	0.011868
0.420704991	178.9086	180.0946	-1.1860	-0.006629
0.438158900	183.5721	182.2139	1.3582	0.007399
0.455466807	188.3586	191.6461	-3.2876	-0.017454
0.472598106	193.5078	193.5651	-0.0573	-0.000296
0.489524394	198.9619	195.4178	3.5441	0.017813
0.506219923	204.6533	206.8897	-2.2364	-0.010928
0.522661209	210.8888	208.5326	2.3562	0.011173
0.538827300	217.5092	223.0560	-5.5468	-0.025501
0.554699600	224.3851	224.5190	-0.1339	-0.000597
0.570261598	231.8150	225.9641	5.8509	0.025240
0.585499227	239.7189	243.1500	-3.4312	-0.014313
0.600400090	247.9770	244.4617	3.5152	0.014176
0.614954293	256.7050	265.1352	-8.4302	-0.032840
0.629153311	266.1051	266.3144	-0.2092	-0.000786
0.642990828	276.3230	267.5076	8.8154	0.031902
0.656461716	287.1939	292.1393	-4.9454	-0.017220
0.669562697	298.1666	293.1595	5.0071	0.016793
0.682291925	308.9219	318.1910	-9.2691	-0.030005
0.694648683	319.1921	319.0041	0.1880	0.000589
0.706633508	329.0331	319.7996	9.2335	0.028063
0.718248010	338.5115	342.6823	-4.1708	-0.012321
0.729494929	347.4580	343.2632	4.1948	0.012073
0.740377605	355.7371	359.2658	-3.5287	-0.009919
0.750900388	363.2440	359.7015	3.5425	0.009752
0.761068285	369.5233	371.4410	-1.9177	-0.005190
0.770887017	373.6952	371.7758	1.9195	0.005136
0.780362606	376.2491	377.1667	-0.9176	-0.002439
0.789501607	377.6770	377.4441	0.2329	0.000617
0.798311174	378.3911	377.7068	0.6843	0.001809
0.806798697	378.7326	378.1615	0.5711	0.001508
0.814971626	378.9726	378.3963	0.5763	0.001521
0.822837889	379.2064	378.6189	0.5876	0.001549
0.830405474	379.4289	378.8298	0.5991	0.001579
0.837682605	379.6360	379.0298	0.6062	0.001597
0.844677329	379.8251	379.2195	0.6056	0.001594

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Operator:
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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
0.851397991	379.9940	379.3995	0.5945	0.001564
0.857852995	380.1414	379.5702	0.5712	0.001503
0.864050388	380.2666	379.7322	0.5343	0.001405
0.869998574	380.3726	379.8860	0.4865	0.001279
0.875705481	380.4729	380.0321	0.4409	0.001159
0.881179392	380.5692	380.1707	0.3985	0.001047
0.886428118	380.6616	380.3024	0.3592	0.000943
0.891459525	380.7501	380.4275	0.3225	0.000847
0.896281302	380.8348	380.5464	0.2884	0.000757
0.900900900	380.9160	380.6594	0.2566	0.000674
0.905325770	380.9937	380.7667	0.2270	0.000596
0.909563184	381.0679	380.8687	0.1992	0.000523
0.913620114	381.1389	380.9657	0.1732	0.000455
0.917503417	381.2068	381.0579	0.1489	0.000391
0.921219707	381.2721	381.1456	0.1266	0.000332
0.924775481	381.3351	381.2289	0.1061	0.000278
0.928177178	381.3956	381.3082	0.0873	0.000229
0.931430817	381.4534	381.3836	0.0697	0.000183
0.934542298	381.5085	381.4554	0.0531	0.000139
0.937517405	381.5608	381.5237	0.0371	0.000097
0.940361619	381.6103	381.5885	0.0218	0.000057
0.943080306	381.6571	381.6503	0.0068	0.000018
0.945678592	381.7012	381.7091	-0.0079	-0.000021
0.948161721	381.7427	381.7650	-0.0223	-0.000058
0.950534225	381.7818	381.8182	-0.0364	-0.000095
0.952800930	381.8192	381.8689	-0.0497	-0.000130
0.954966187	381.8548	381.9171	-0.0623	-0.000163
0.957034409	381.8889	381.9630	-0.0742	-0.000194
0.959009588	381.9214	382.0067	-0.0853	-0.000223
0.960896015	381.9524	382.0483	-0.0959	-0.000251
0.962697208	381.9821	382.0879	-0.1058	-0.000277
0.964416981	382.0104	382.1256	-0.1152	-0.000302
0.966058910	382.0374	382.1615	-0.1241	-0.000325
0.967626274	382.0632	382.1957	-0.1325	-0.000347
0.969122529	382.0879	382.2282	-0.1404	-0.000367
0.970550597	382.1114	382.2592	-0.1479	-0.000387
0.971913695	382.1338	382.2888	-0.1549	-0.000405
0.973214507	382.1552	382.3169	-0.1616	-0.000423
0.974455774	382.1757	382.3436	-0.1680	-0.000440
0.975640416	382.1952	382.3691	-0.1739	-0.000455
0.976770699	382.2138	382.3934	-0.1796	-0.000470
0.977849126	382.2315	382.4165	-0.1850	-0.000484
0.978878021	382.2485	382.4385	-0.1901	-0.000497
0.979859591	382.2646	382.4595	-0.1949	-0.000510
0.980795979	382.2800	382.4795	-0.1995	-0.000522
0.981689274	382.2947	382.4985	-0.2038	-0.000533

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Isotherm Table

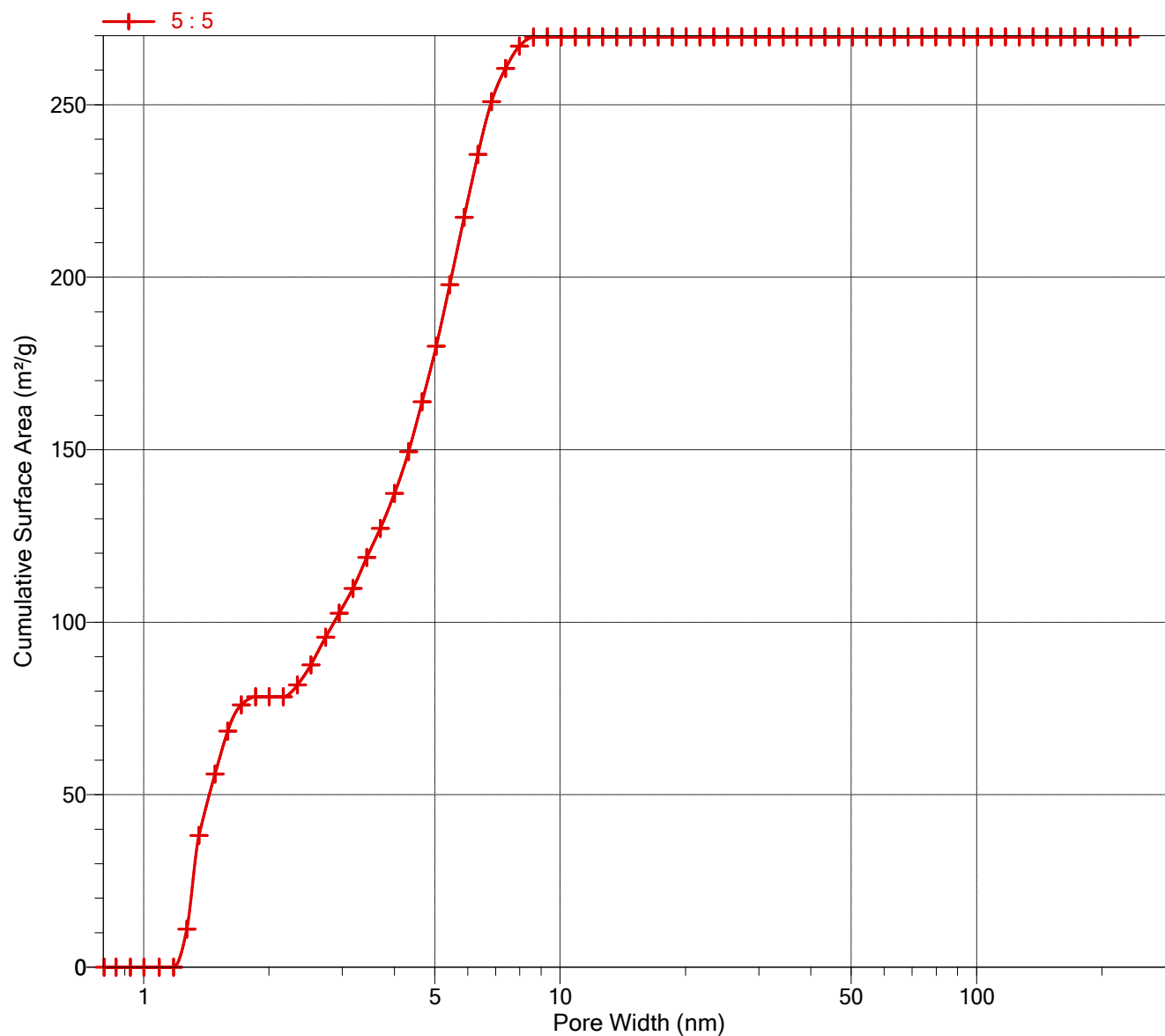
Relative Pressure (P/Po)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.982541502	382.3088	382.5167	-0.2079	-0.000544
0.983354270	382.3221	382.5339	-0.2118	-0.000554
0.984129488	382.3349	382.5504	-0.2155	-0.000564
0.984869003	382.3471	382.5661	-0.2190	-0.000573
0.985574186	382.3587	382.5810	-0.2223	-0.000581
0.986246824	382.3698	382.5952	-0.2254	-0.000590
0.986888289	382.3803	382.6087	-0.2284	-0.000597
0.987500012	382.3904	382.6217	-0.2313	-0.000605
0.988083303	382.4000	382.6340	-0.2340	-0.000612
0.988639593	382.4092	382.6457	-0.2366	-0.000619
0.989170074	382.4179	382.6568	-0.2390	-0.000625
0.989675879	382.4262	382.6675	-0.2413	-0.000631
0.990158200	382.4342	382.6776	-0.2435	-0.000637
0.990618110	382.4417	382.6873	-0.2456	-0.000642
0.991056621	382.4489	382.6965	-0.2476	-0.000647
0.991474688	382.4558	382.7053	-0.2494	-0.000652
0.991873324	382.4624	382.7136	-0.2512	-0.000657
0.992253423	382.4686	382.7216	-0.2529	-0.000661
0.992615700	382.4746	382.7292	-0.2546	-0.000666
0.992961228	382.4803	382.7364	-0.2561	-0.000670
0.993290603	382.4857	382.7433	-0.2576	-0.000673
0.993604600	382.4909	382.7498	-0.2590	-0.000677
0.993903875	382.4958	382.7561	-0.2603	-0.000681
0.994189322	382.5005	382.7620	-0.2615	-0.000684
0.994461298	382.5050	382.7677	-0.2627	-0.000687

Sample: 5
Operator:
Submitter:
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Started: 2023/9/18 9:40:59
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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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Cumulative Surface Area vs. Pore Width

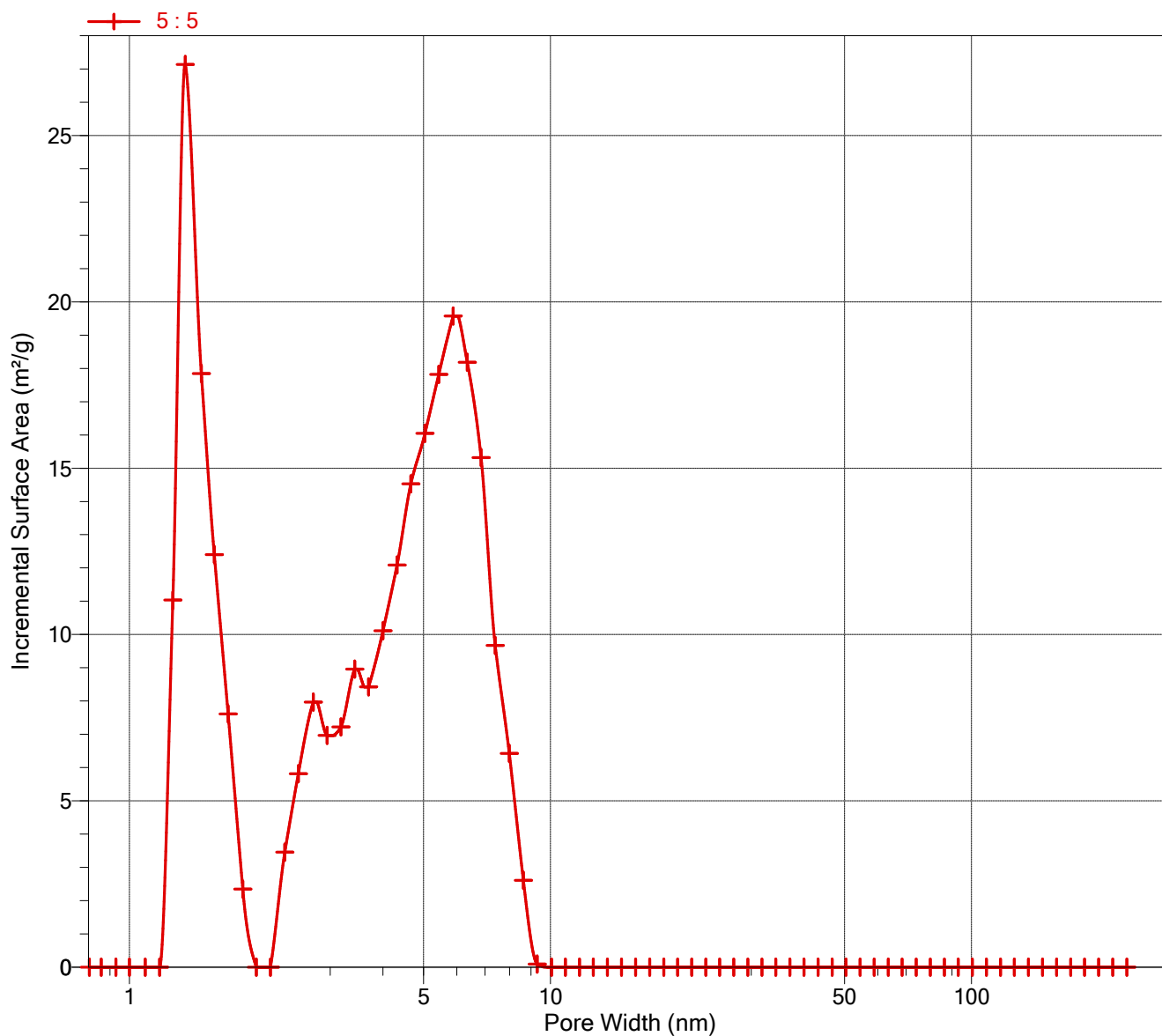


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Incremental Surface Area vs. Pore Width

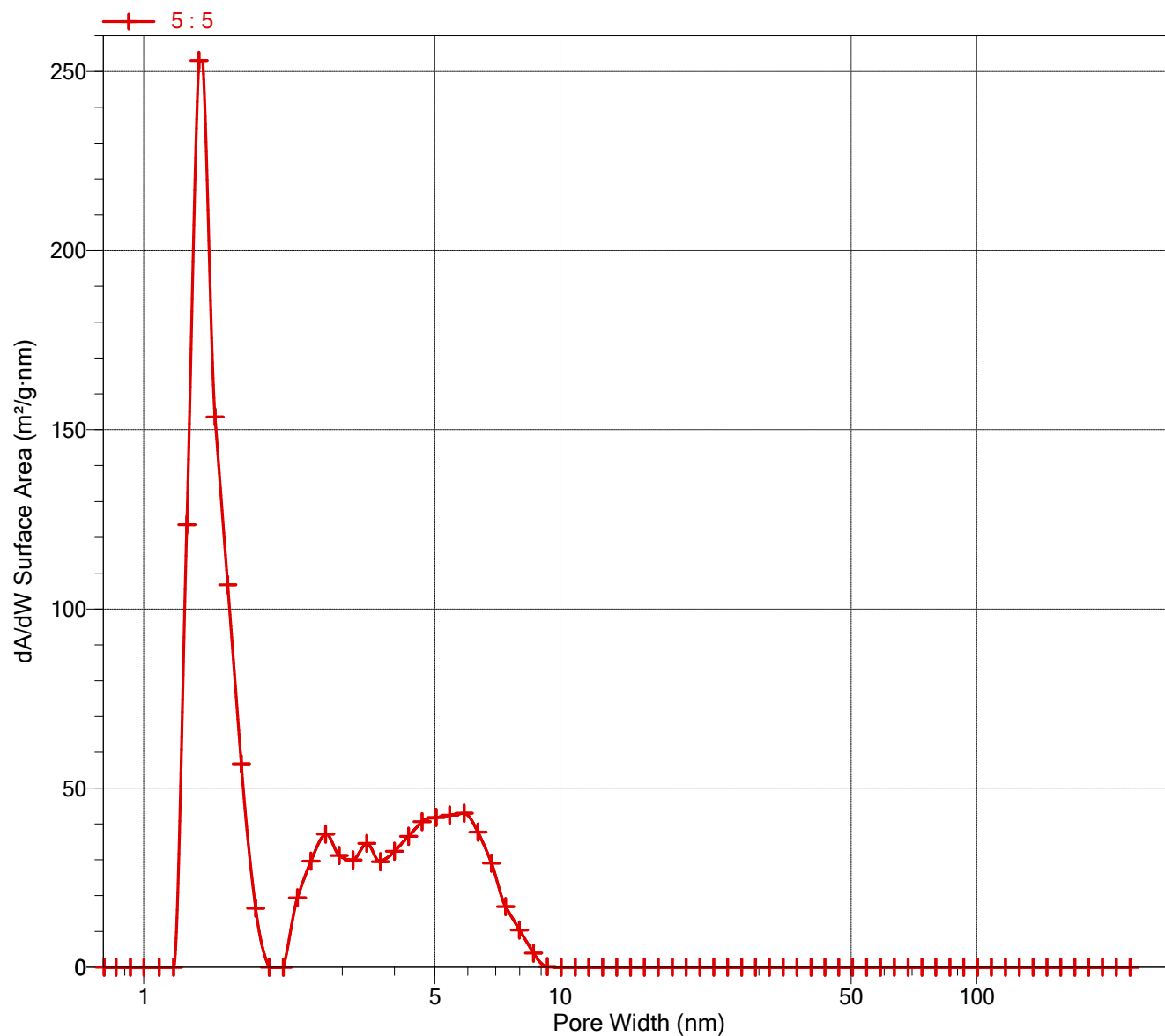


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

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Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dA/dW Surface Area vs. Pore Width

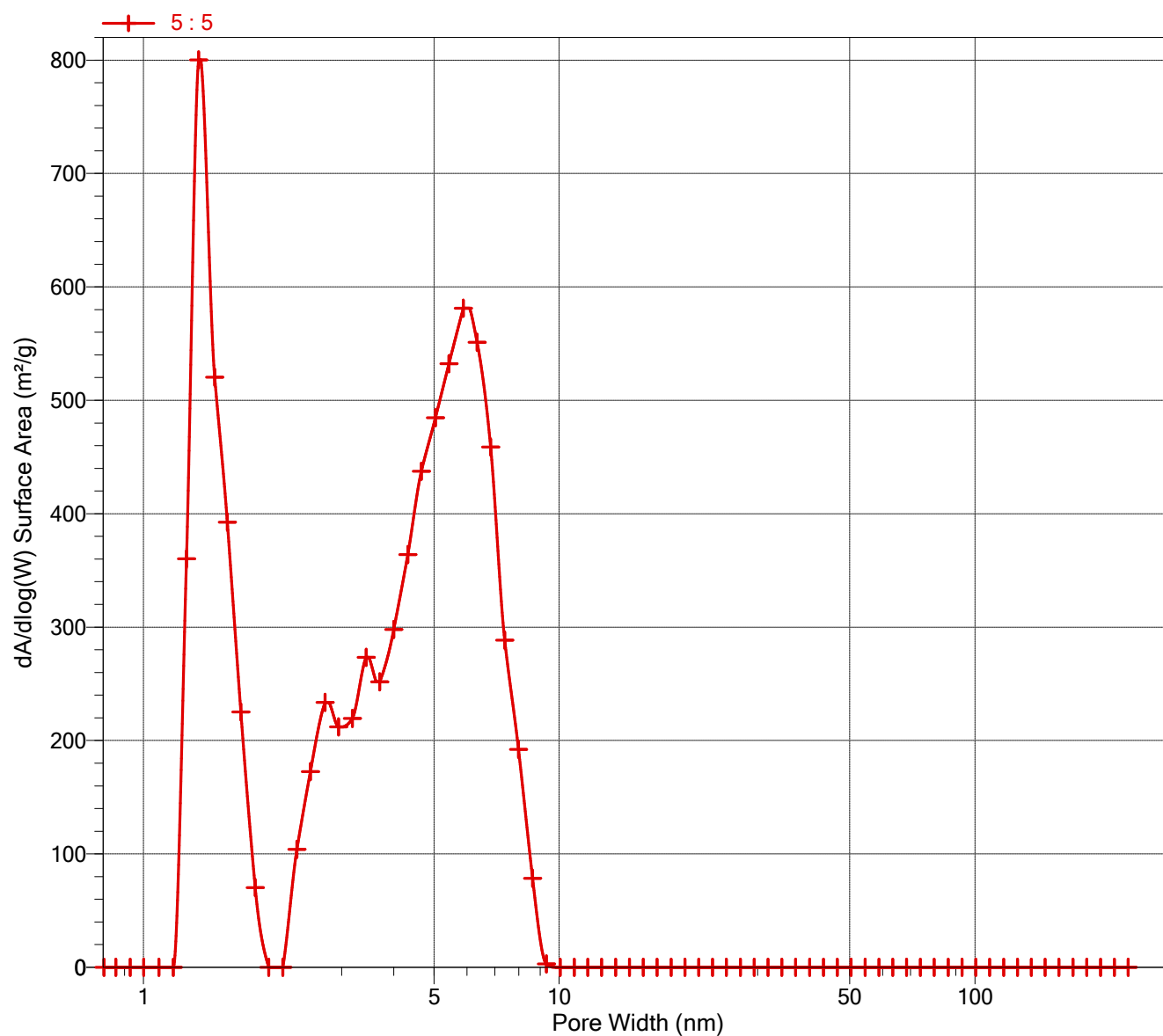


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

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

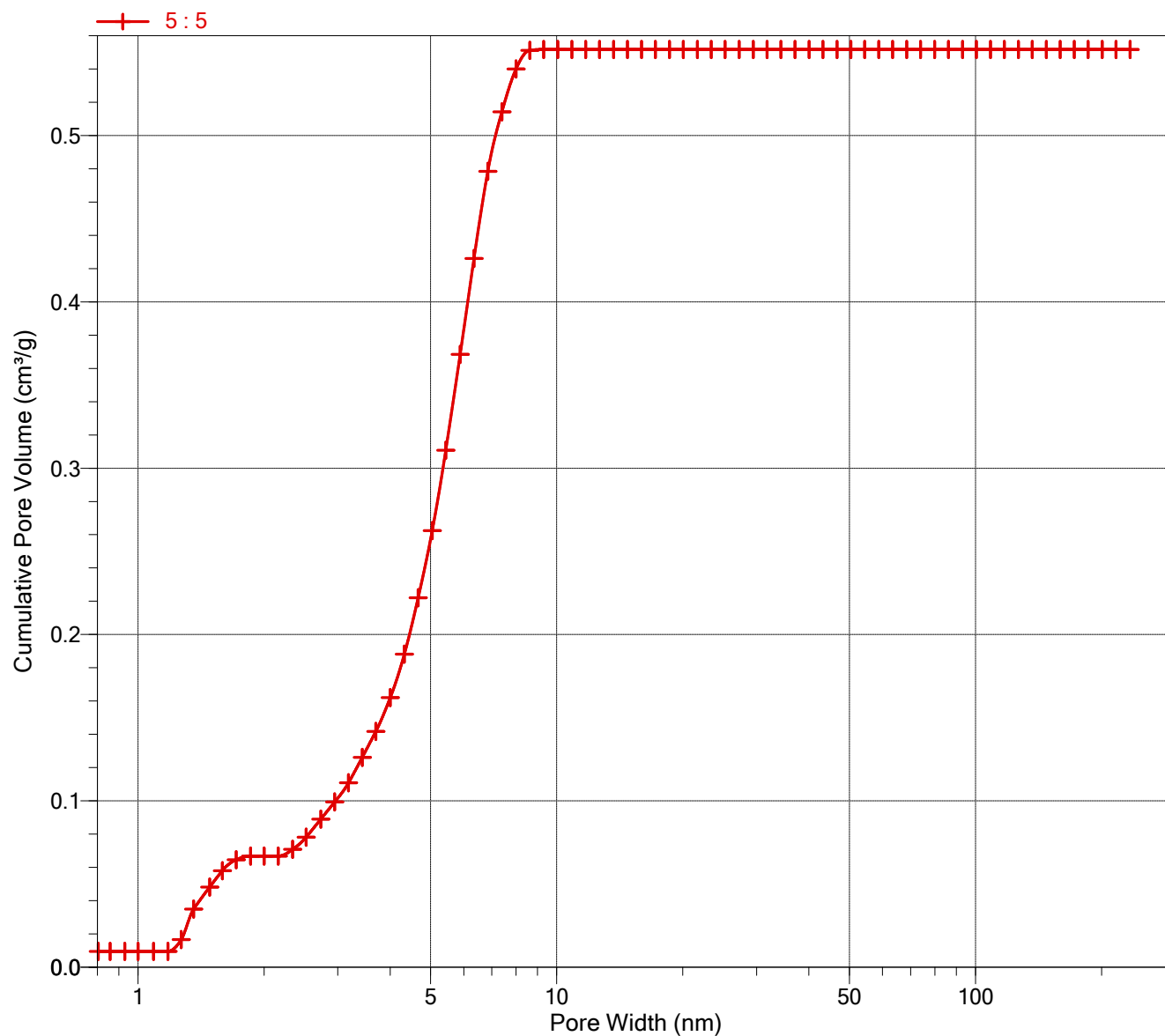


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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Report time: 2023/9/19 8:42:08
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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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Cumulative Pore Volume vs. Pore Width

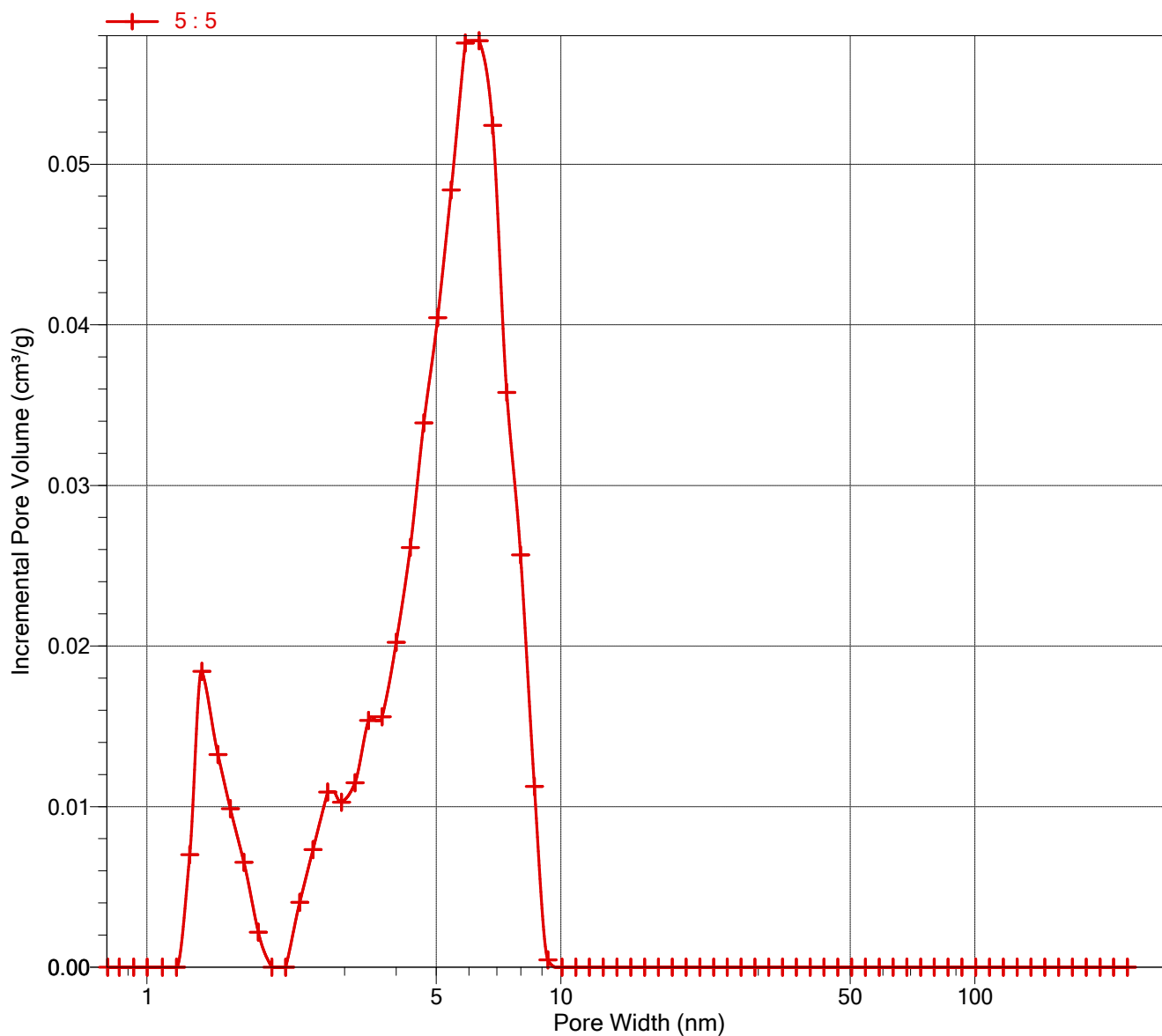


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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Automatic degas: No

Analysis adsorptive: N2
Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Incremental Pore Volume vs. Pore Width

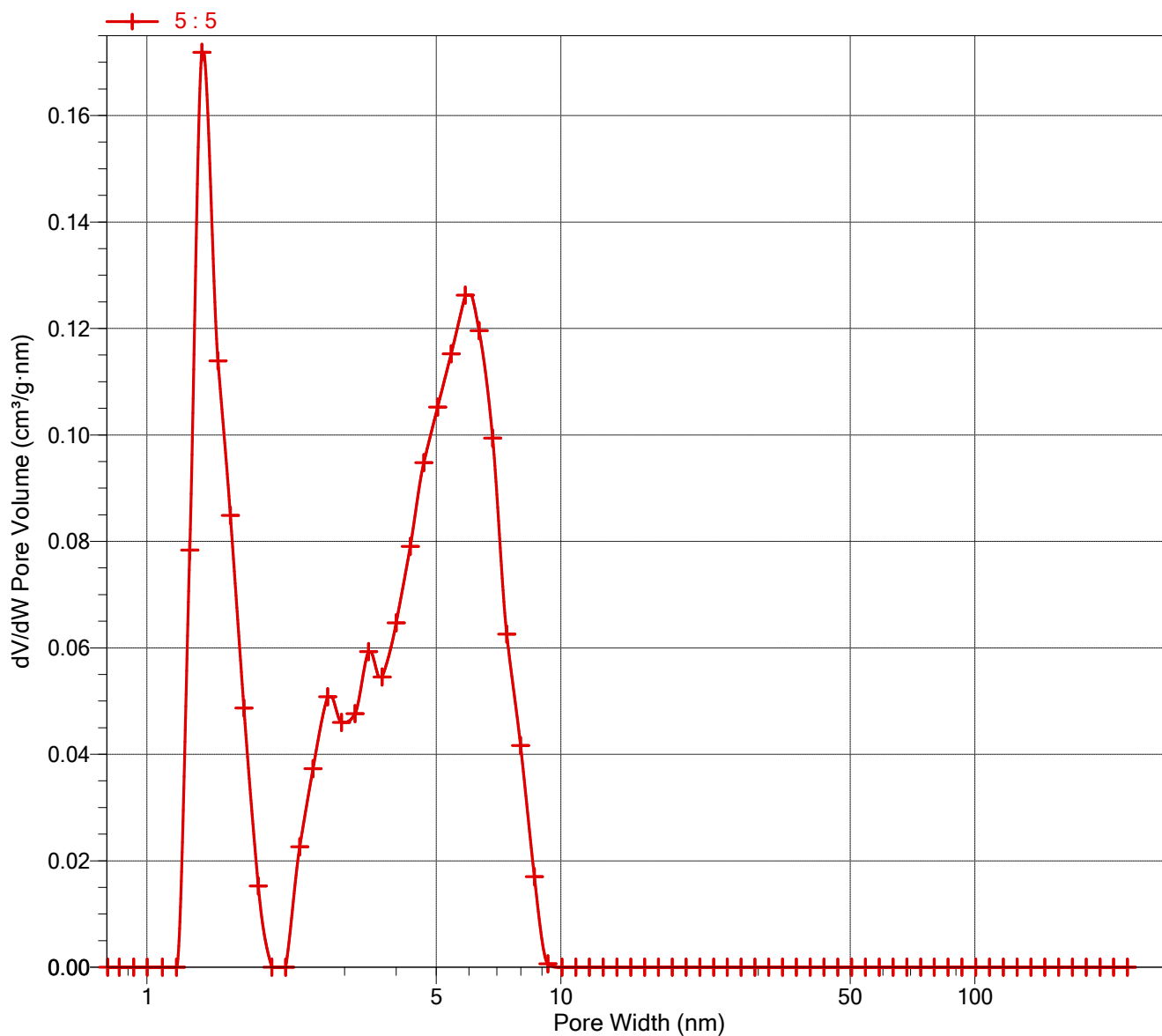


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

dV/dW Pore Volume vs. Pore Width

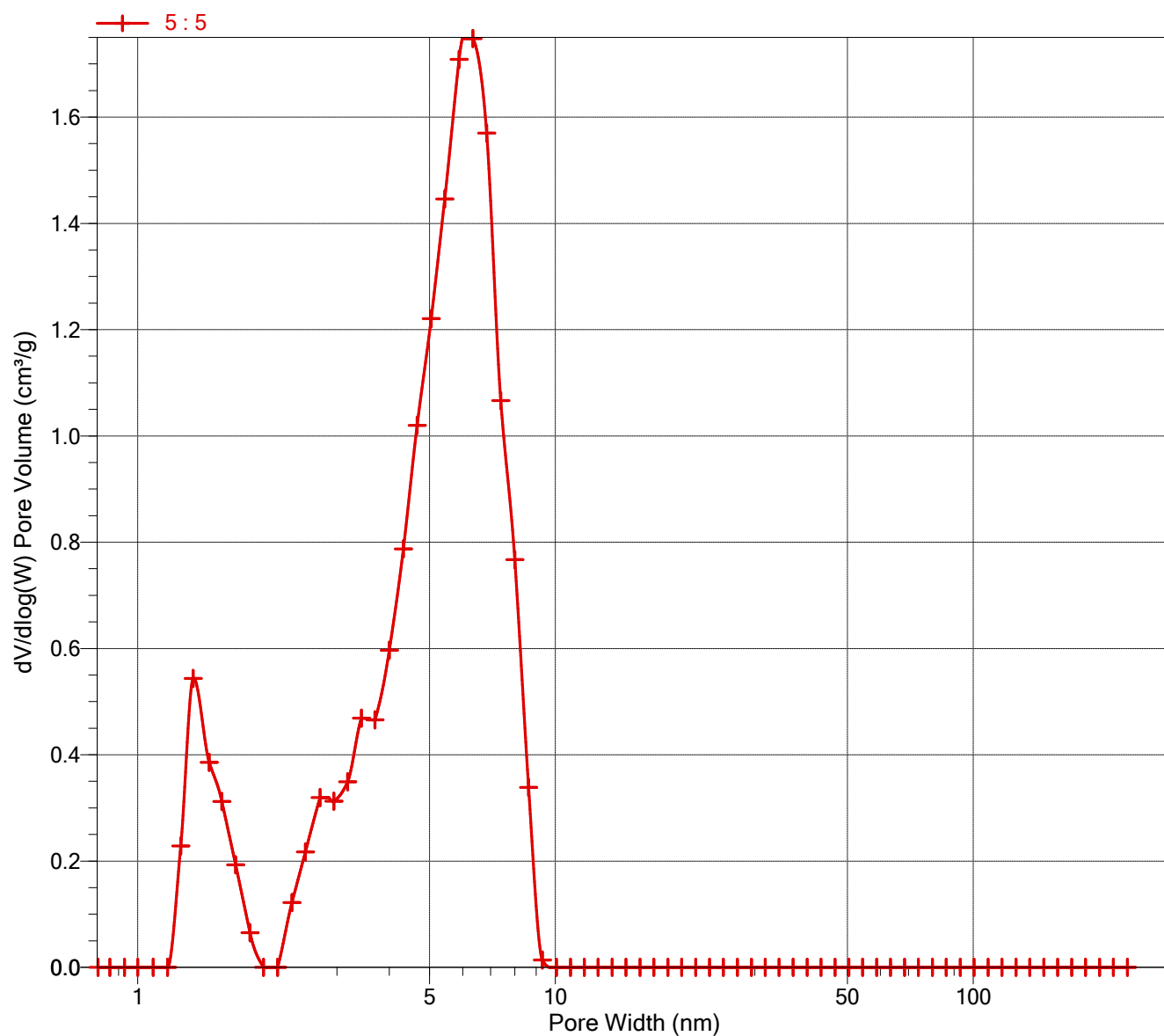


Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

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



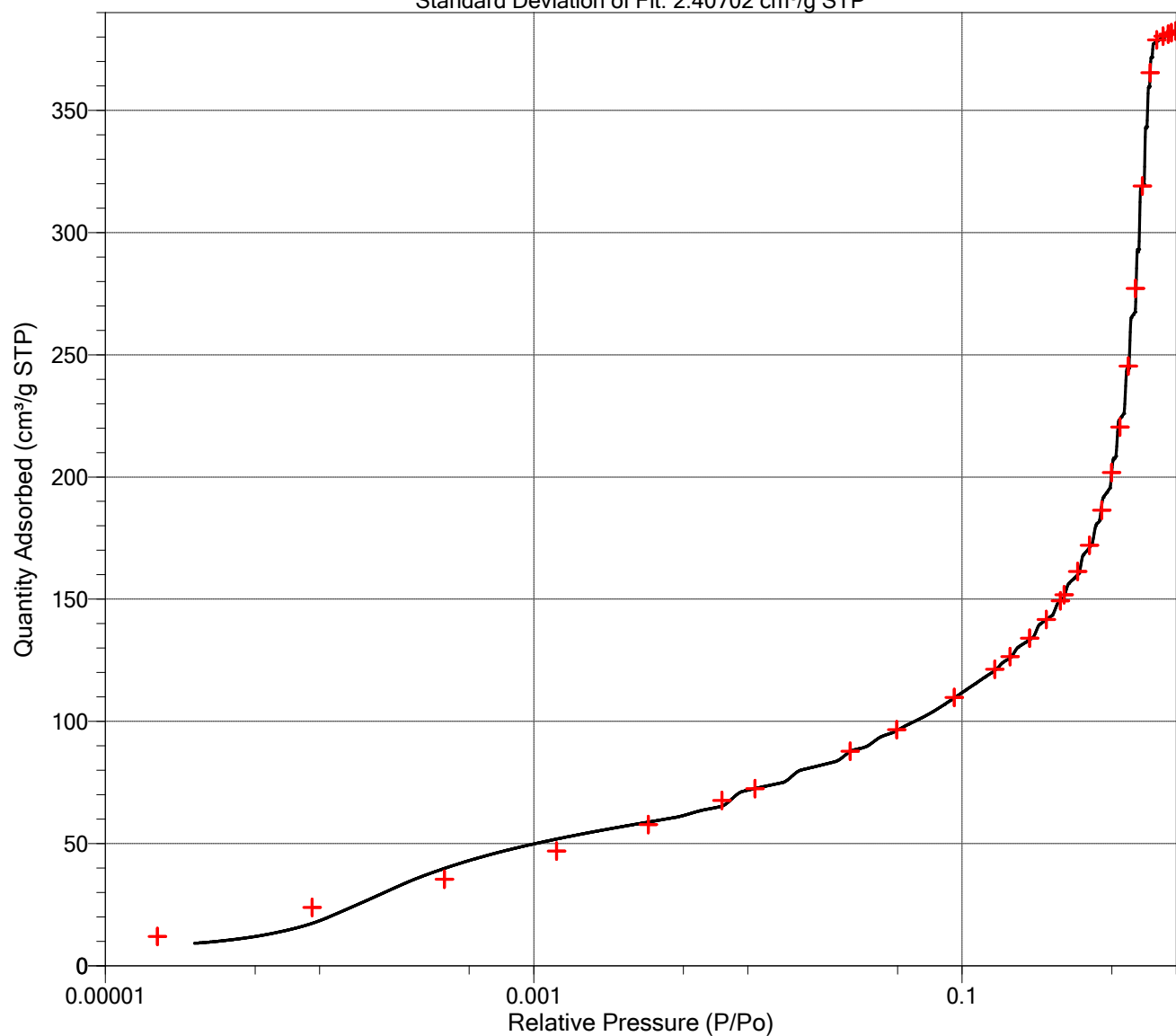
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
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Sample mass: 0.1739 g
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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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Goodness of Fit

Standard Deviation of Fit: 2.40702 cm³/g STP



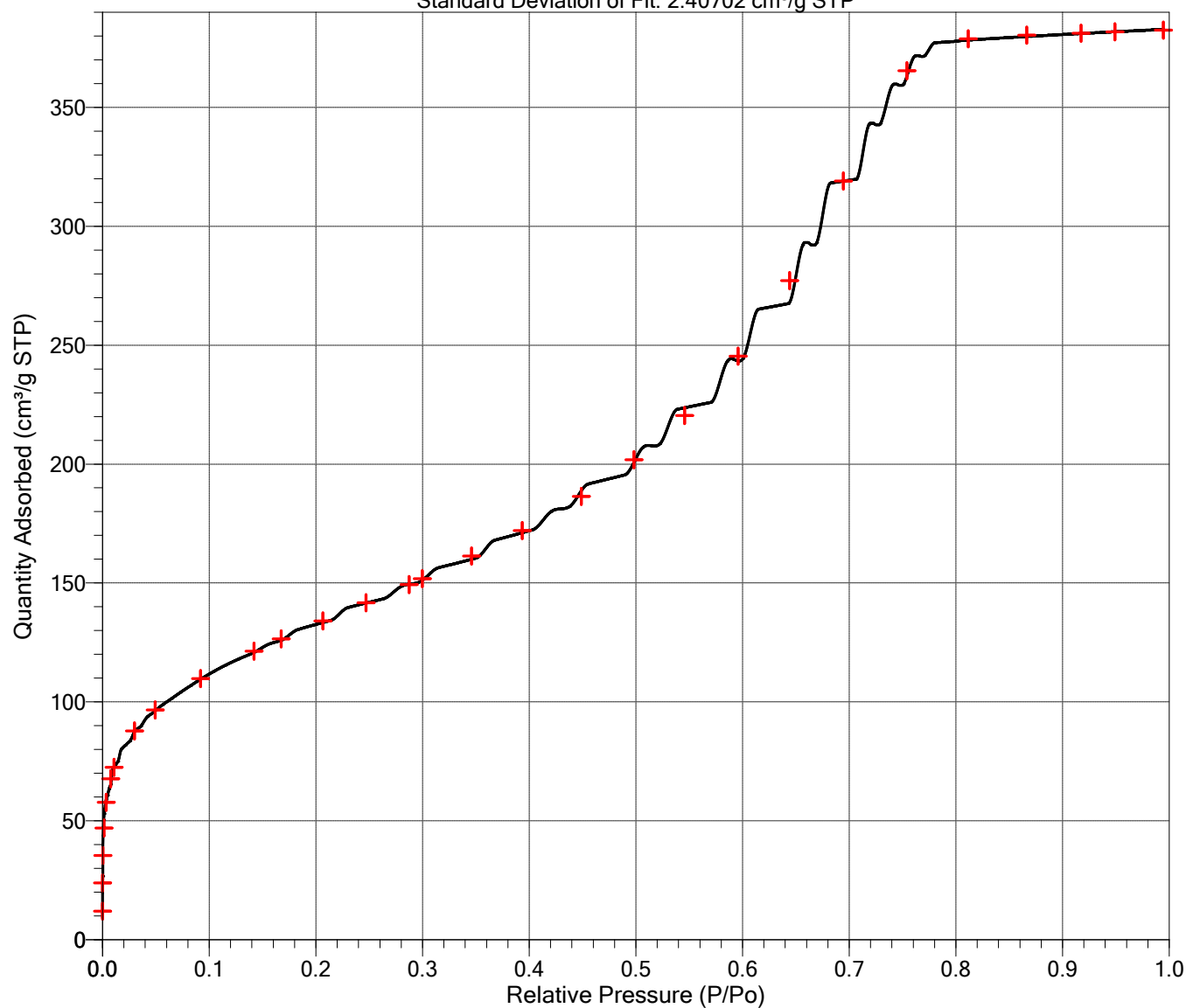
Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Goodness of Fit

Standard Deviation of Fit: 2.40702 cm³/g STP



Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Dubinin-Astakhov Tabular Report

Slope: -0.119505 ± 0.000617
Y-intercept: 2.153154 ± 0.001964
Correlation coefficient: 0.999933
Astakhov fitted relative pressure range: 0.000100000 to 0.050000000 P/Po

Characteristic energy: 11.949938 kJ/mol
Limiting micropore capacity: 142.2834 cm³/g STP
Limiting micropore volume: 0.220084 ± 0.000998 cm³/g
Equivalent surface area: 438.701599 m²/g

Affinity coefficient (beta): 0.33000
Optimize exponent: Yes
Exponent: 1.3166

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

Medek Quantities

Mean equivalent pore width: 2.006685 nm
Maximum differential pore volume: 0.181242 cm³/g·nm
Modal equivalent pore width: 1.716626 nm

Absolute Pressure (mmHg)	Relative Pressure (P/Po)	Quantity Adsorbed (cm ³ /g STP)	Log Quantity Adsorbed	Log (Po/P) ^{1.3166}	Differential Pore Volume (cm ³ /g·nm)
0.013402	0.000017519	11.9835	1.0786	7.793449	0.125364
0.070464	0.000092203	23.8704	1.3779	6.276273	0.165878
0.292344	0.000382980	35.4121	1.5492	5.041712	0.179970
0.974211	0.001276679	46.9455	1.6716	4.05137	0.179616
2.614624	0.003427079	57.8217	1.7621	3.280134	0.170432
5.768948	0.007560207	67.6670	1.8304	2.69188	0.156817
8.233700	0.010781745	72.5318	1.8605	2.437356	0.148652
22.922024	0.030008793	87.8490	1.9437	1.739614	0.118384
37.792152	0.049470828	96.6641	1.9853	1.420693	0.098748
70.281250	0.091976337	109.7567	2.0404	1.048098	0.068059
108.547943	0.142024542	121.2793	2.0838	0.8044137	0.040926
128.044922	0.167540859	126.4840	2.1020	0.7159798	0.029114
157.805847	0.206468413	134.0551	2.1273	0.6078398	0.013143
188.724762	0.246894147	141.6635	2.1513	0.5188031	0.000525
219.631287	0.287270725	149.3869	2.1743	0.4461395	0.000000
229.129776	0.299710406	151.8135	2.1813	0.4262846	0.000000
264.420410	0.345874706	161.2949	2.2076	0.3608466	0.000000
300.801880	0.393453221	172.0877	2.2357	0.3043115	0.000000
343.066315	0.448708776	186.4578	2.2706	0.249168	0.000000
380.866089	0.498236163	201.8707	2.3051	0.2072216	0.000000
417.068848	0.545788310	220.4577	2.3433	0.1722858	0.000000
455.163025	0.595848519	245.3981	2.3899	0.1401927	0.000000
491.966949	0.643999954	277.1146	2.4427	0.1131712	0.000000
530.557007	0.694502271	319.0723	2.5039	0.08833153	0.000000

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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) ^{1.3166}	Differential Pore Volume (cm ³ /g·nm)
575.858521	0.754134812	365.4312	2.5628	0.06304634	0.000000
619.502014	0.811430417	378.8678	2.5785	0.04244945	0.000000
661.587708	0.866475398	380.3107	2.5801	0.02583941	0.000000
700.452515	0.917416397	381.2053	2.5812	0.01322898	0.000000
724.603210	0.949042568	381.7573	2.5818	0.006852851	0.000000
759.327698	0.994509059	382.5058	2.5826	0.0003537098	0.000000

Sample: 5
Operator:
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Ambient free space: 28.1681 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: 597.9418 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 - 0.945	0.4727	0.0000	0.0000	0.0000	0.0000
0.945 - 0.960	0.9527	0.3177	0.3177	21.6514	333.5336
0.960 - 0.980	0.9700	0.0121	0.3298	0.6030	12.4325
0.980 - 1.000	0.9900	0.0270	0.3568	1.3477	27.2262
1.000 - 1.020	1.0100	0.0418	0.3985	2.0890	41.3657
1.020 - 1.040	1.0300	0.0572	0.4557	2.8585	55.5051
1.040 - 1.060	1.0500	0.0730	0.5287	3.6509	69.5404
1.060 - 1.080	1.0700	0.0391	0.5678	1.9548	36.5385
1.080 - 1.100	1.0900	0.0022	0.5701	0.1123	2.0596
1.100 - 1.120	1.1100	0.0023	0.5724	0.1160	2.0896
1.120 - 1.140	1.1300	0.0024	0.5748	0.1198	2.1196
1.140 - 1.160	1.1500	0.0025	0.5773	0.1236	2.1496
1.160 - 1.180	1.1700	0.0026	0.5798	0.1275	2.1796
1.180 - 1.200	1.1900	0.0026	0.5824	0.1315	2.2096
1.200 - 1.220	1.2100	0.0019	0.5844	0.0959	1.5853
1.220 - 1.240	1.2300	-0.0002	0.5842	-0.0084	-0.1361
1.240 - 1.260	1.2500	-0.0002	0.5840	-0.0085	-0.1353
1.260 - 1.280	1.2700	-0.0000	0.5840	-0.0020	-0.0319
1.280 - 1.300	1.2900	0.0001	0.5841	0.0046	0.0715
1.300 - 1.320	1.3100	0.0002	0.5843	0.0115	0.1749
1.320 - 1.340	1.3300	0.0004	0.5847	0.0185	0.2784
1.340 - 1.360	1.3500	0.0005	0.5852	0.0258	0.3818
1.360 - 1.380	1.3700	0.0007	0.5858	0.0332	0.4852
1.380 - 1.400	1.3900	0.0008	0.5867	0.0409	0.5883
1.400 - 1.420	1.4100	0.0003	0.5869	0.0134	0.1908
1.420 - 1.440	1.4300	-0.0002	0.5867	-0.0098	-0.1372
1.440 - 1.460	1.4500	-0.0000	0.5867	-0.0005	-0.0069
1.460 - 1.480	1.4700	0.0002	0.5869	0.0091	0.1235
1.480 - 1.500	1.4900	0.0004	0.5873	0.0189	0.2538
1.500 - 1.520	1.5100	0.0006	0.5879	0.0290	0.3842
1.520 - 1.540	1.5300	0.0008	0.5887	0.0394	0.5145
1.540 - 1.560	1.5500	0.0010	0.5897	0.0500	0.6449
1.560 - 1.580	1.5700	0.0011	0.5907	0.0533	0.6795
1.580 - 1.600	1.5900	0.0002	0.5909	0.0092	0.1151
1.600 - 1.620	1.6100	0.0000	0.5909	0.0000	0.0000
1.620 - 1.640	1.6300	-0.0000	0.5909	-0.0000	-0.0000
1.640 - 1.660	1.6500	0.0000	0.5909	0.0000	0.0000
1.660 - 1.680	1.6700	0.0000	0.5909	0.0000	0.0000
1.680 - 1.700	1.6900	-0.0000	0.5909	-0.0000	-0.0000
1.700 - 1.720	1.7100	0.0000	0.5909	0.0000	0.0000
1.720 - 1.740	1.7300	-0.0000	0.5909	-0.0000	-0.0000
1.740 - 1.760	1.7500	0.0000	0.5909	0.0000	0.0000

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59
Completed: 2023/9/19 5:43:40
Report time: 2023/9/19 8:42:08
Sample mass: 0.1739 g
Analysis free space: 85.0510 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: 28.1681 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)
1.760 - 1.780	1.7700	0.0000	0.5909	0.0000	0.0000
1.780 - 1.800	1.7900	-0.0000	0.5909	-0.0000	-0.0000
1.800 - 1.820	1.8100	0.0000	0.5909	0.0000	0.0000
1.820 - 1.840	1.8300	-0.0000	0.5909	-0.0000	-0.0000
1.840 - 1.860	1.8500	0.0000	0.5909	0.0000	0.0000
1.860 - 1.880	1.8700	0.0000	0.5909	0.0000	0.0000
1.880 - 1.900	1.8900	-0.0000	0.5909	-0.0000	-0.0000
1.900 - 1.920	1.9100	0.0000	0.5909	0.0000	0.0000
1.920 - 1.940	1.9300	-0.0000	0.5909	-0.0000	-0.0000
1.940 - 1.960	1.9500	0.0000	0.5909	0.0000	0.0000

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

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Analysis bath temp.: -195.850 °C
Thermal correction: No
Ambient free space: 28.1681 cm³ Measured
Equilibration interval: 20 s
Sample density: 1.000 g/cm³

Sample Information

Method: Default
Sample: 5
Operator:
Submitter:
Mass type: Entered
Sample mass: 0.1739 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
Report time: 2023/9/19 8:42:08	Thermal correction: No
Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
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Analysis free space: 85.0510 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
2023/9/18	9:40:59	Starting a sample analysis for F:\DATA\wangcheng\FXL\BET-20230917\5.SMP on port 1.
2023/9/18	10:45:04	6523- Analysis canceled: Time limit exceeded while evacuating sample (unrestricted).
2023/9/18	10:58:56	Measured warm freespace: 28.1681 cm ³ (P1: 799.90 mmHg, P2: 580.95 mmHg, Tman: 300.1 K).
2023/9/18	11:10:30	Measured cold freespace: 85.0510 cm ³ (P3: 192.41 mmHg).
2023/9/18	11:35:19	Low pressure data collection started
2023/9/18	19:25:50	Standard data collection started.
2023/9/19	5:31:01	Termination started.
2023/9/19	5:43:40	Finished a sample analysis for F:\DATA\wangcheng\FXL\BET-20230917\5.SMP on port 1.

Sample: 5
Operator:
Submitter:
File: F:\DATA\wangcheng\FXL\BET-20230917\5.SMP

Started: 2023/9/18 9:40:59	Analysis adsorptive: N2
Completed: 2023/9/19 5:43:40	Analysis bath temp.: -195.850 °C
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Sample mass: 0.1739 g	Ambient free space: 28.1681 cm ³ Measured
Analysis free space: 85.0510 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: Passed
BET: Passed