

Sample: 2
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz...\\HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
Completed:	15.03.2023 02:52:01	Analysis bath temp.:	77,300 K
Report time:	19.10.2023 09:08:36	Thermal correction:	Yes
Sample mass:	0,6800 g	Ambient free space:	28,5373 cm ³ Entered
Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Summary Report

Surface Area

BET Surface Area: 1,6619 m²/gt-Plot Micropore Area: 1,8913 m²/gt-Plot external surface area: -0,2294 m²/g

DFT Pore Size

Volume in Pores	<	1,594 nm	0,00044 cm ³ /g
Total Volume in Pores	<=	18,466 nm	0,00098 cm ³ /g
Area in Pores	>	18,466 nm	0,000 m ² /g
Total Area in Pores	>=	1,594 nm	0,149 m ² /g

Horvath-Kawazoe

Maximum pore volume at p/p° = 0,160165803: 0,000639 cm³/g

Median pore width: 1,2563 nm

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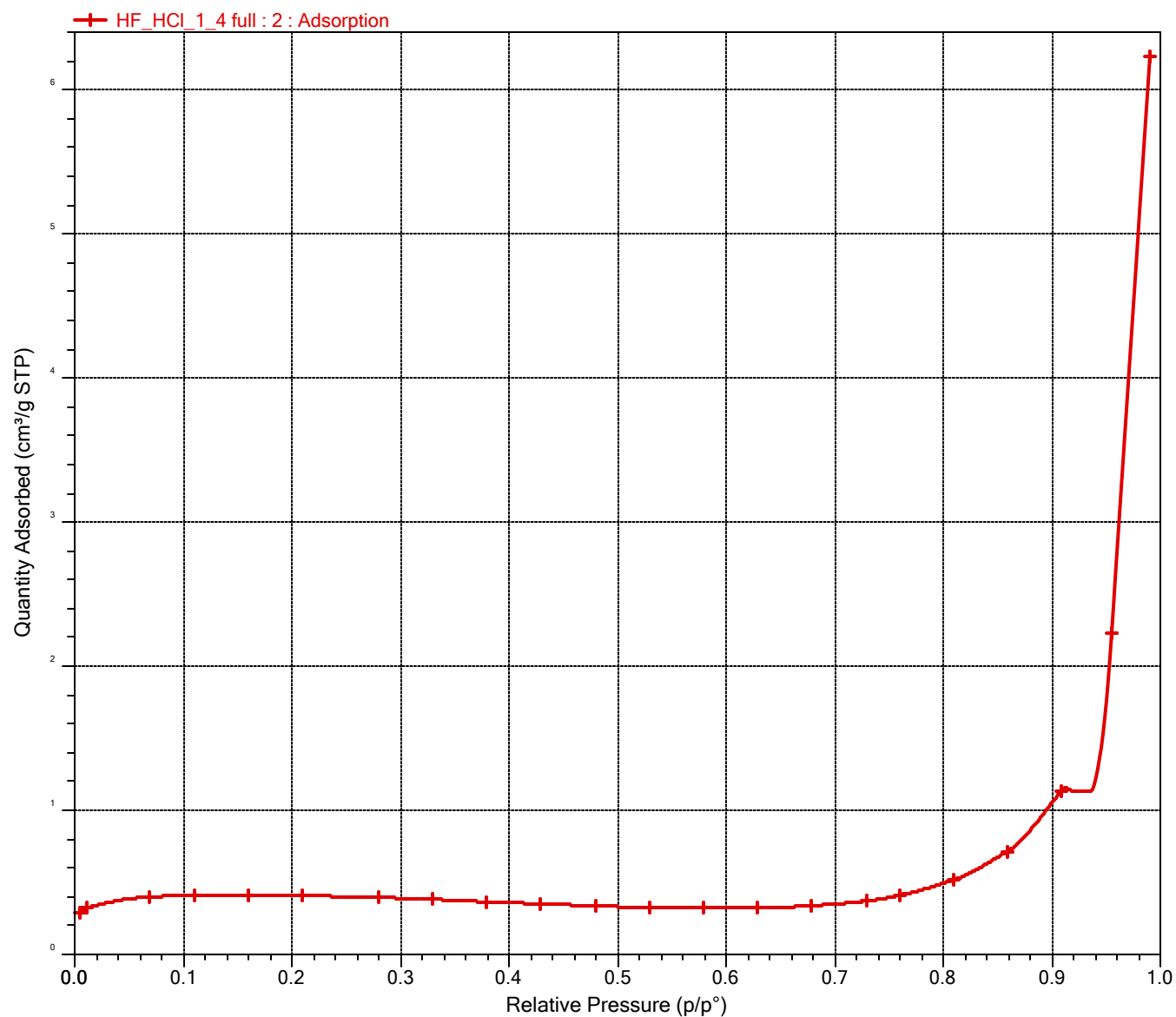
Isotherm Tabular Report

Relative Pressure (p/p°)	Absolute Pressure (kPa)	Quantity Adsorbed (cm ³ /g STP)	Elapsed Time (h:min)	Saturation Pressure (kPa)
			04:51	100.0499333
0.005526755	0.5540892	0.2890	05:37	100.2557920
0.011950006	1.2022726	0.3240	08:48	100.6085382
0.068824382	6.9249657	0.3990	08:54	100.6179124
0.110181308	11.0878979	0.4115	08:59	100.6332025
0.160165803	16.1184617	0.4134	09:04	100.6360994
0.210060017	21.1420223	0.4080	09:10	100.6475324
0.279741188	28.1566875	0.3953	09:15	100.6526345
0.329616769	33.1802482	0.3824	09:21	100.6631073
0.379607703	38.2152092	0.3647	09:26	100.6702681
0.429543831	43.2475602	0.3514	09:31	100.6825311
0.479456904	48.2789469	0.3371	09:37	100.6950708
0.529389665	53.3134950	0.3247	09:42	100.7074721
0.579387428	58.3477664	0.3207	09:47	100.7059586
0.629320253	63.3784655	0.3208	09:53	100.7094007
0.679031947	68.4020240	0.3386	09:58	100.7346183
0.728964854	73.4423415	0.3707	10:03	100.7488099
0.759916631	76.5525275	0.4109	10:09	100.7380604
0.809630229	81.5594655	0.5172	10:14	100.7366852
0.859382272	86.5813844	0.7162	10:20	100.7483949
0.908625272	91.5504268	1.1344	10:25	100.7570774
0.955591296	96.2956187	2.2345	10:32	100.7707156
0.991055119	99.8775271	6.2308	10:46	100.7789832
0.881889304	88.8954769	1.0037	10:54	100.8011737
0.778442929	78.4723571	0.4854	10:59	100.8068211
0.676556968	68.2074314	0.3366	11:04	100.8155036
0.575932909	58.0705023	0.2981	11:10	100.8285885
0.475632800	47.9629572	0.2957	11:15	100.8403063
0.375358620	37.8545861	0.3188	11:21	100.8491190
0.275232745	27.7596742	0.3464	11:26	100.8589083
0.175238666	17.6752005	0.3605	11:31	100.8635872
0.130333204	13.1460187	0.3577	11:37	100.8646939

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Automatic degas:	No		

Isotherm Linear Plot

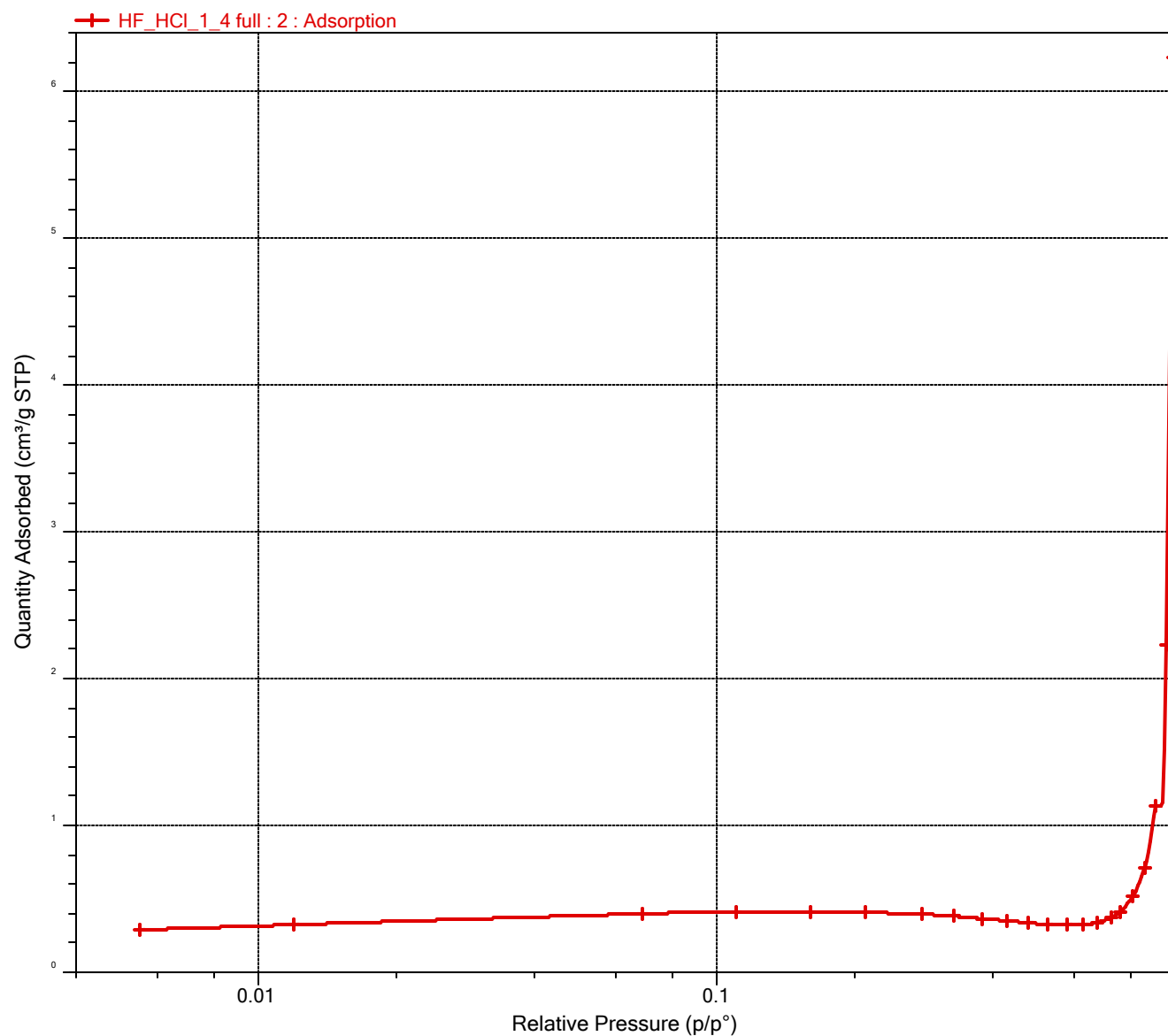


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Isotherm Log Plot



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Automatic degas:	No		

BET Report

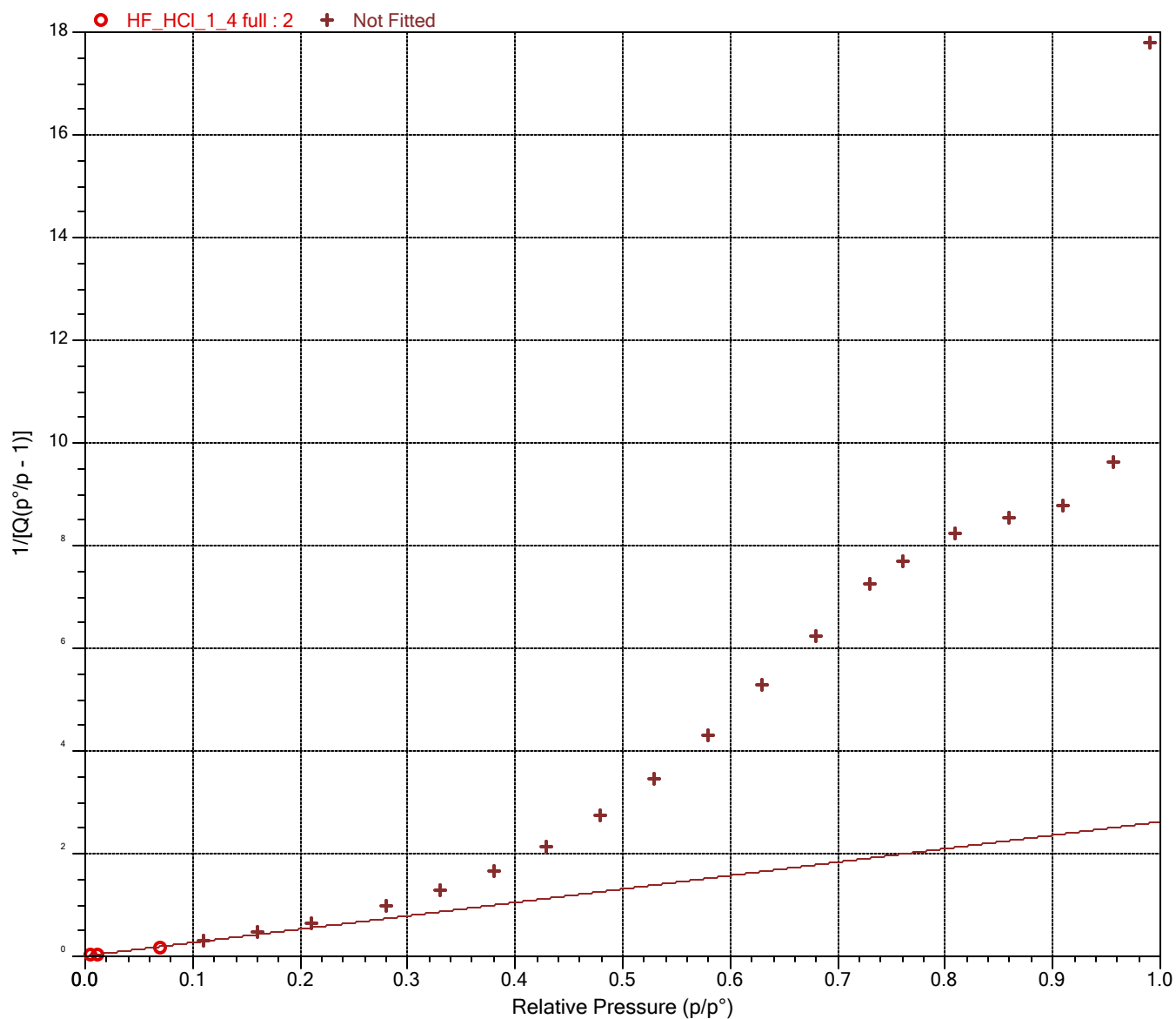
BET surface area: 1,6619 ± 0,0120 m²/g
 Slope: 2,613642 ± 0,018864 g/cm³ STP
 Y-intercept: 0,005407 ± 0,000763 g/cm³ STP
 C: 484,404589
 Qm: 0,3818 cm³/g STP
 Correlation coefficient: 0,9999740
 Molecular cross-sectional area: 0,1620 nm²

Relative Pressure (p/p°)	Quantity Adsorbed (cm ³ /g STP)	1/[Q(p°/p - 1)]
0.005526755	0.2890	0.019232
0.011950006	0.3240	0.037329
0.068824382	0.3990	0.185219

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Automatic degas:	No		

BET Surface Area Plot



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Automatic degas:	No		

t-Plot Report

Micropore volume:	0,000727 cm ³ /g
Micropore area:	1,8913 m ² /g
External surface area:	-0,2294 m ² /g
Slope:	-0,148282 ± 0,052300 cm ³ /g-nm STP
Y-intercept:	0,469923 ± 0,022292 cm ³ /g STP
Correlation coefficient:	-0,894856
Surface area correction factor:	1,000
Density conversion factor:	0,0015468
Total surface area (BET):	1,6619 m ² /g
Thickness range:	0,35000 to 0,50000 nm
Thickness equation:	Carbon Black STSA

Thickness Curve

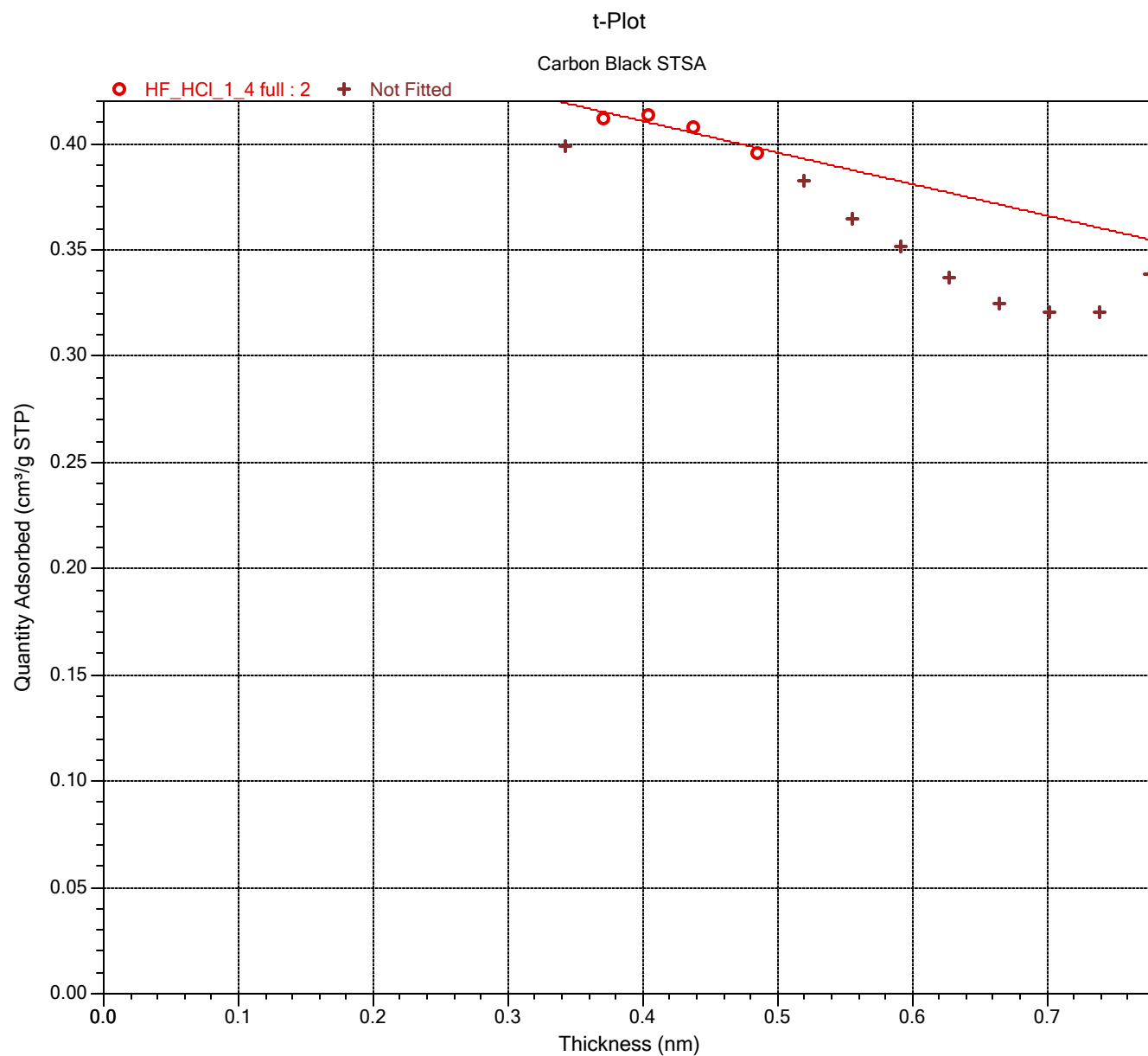
$$t = 2.98 + 6.45 (p/p^\circ) + 0.88 (p/p^\circ)^2$$

t-Plot Report - Data

Relative Pressure (p/p°)	Statistical Thickness (nm)	Quantity Adsorbed (cm ³ /g STP)	Fitted
0.068824382	0.34281	0.3990	
0.110181308	0.37014	0.4115	
0.160165803	0.40356	0.4134	
0.210060017	0.43737	0.4080	
0.279741188	0.48532	0.3953	
0.329616769	0.52016	0.3824	
0.379607703	0.55553	0.3647	
0.429543831	0.59129	0.3514	
0.479456904	0.62748	0.3371	
0.529389665	0.66412	0.3247	
0.579387428	0.70125	0.3207	
0.629320253	0.73876	0.3208	
0.679031947	0.77655	0.3386	

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Automatic degas:	No		

Horvath-Kawazoe Report

Cylinder Pore Geometry (Saito-Foley)

Maximum pore volume: 0,000639 cm³/g
 at Relative Pressure: 0,160165803
 Median pore width: 1,2563 nm
 Relative pressure range: 1e-09 to 0.18

Diameter of adsorptive molecule: 0,3000 nm
 Adsorptive density: 6.710e+14 molecules/cm²
 Adsorptive dispersion constant: 7.777e-59
 Diameter of sample atom: 0,3400 nm
 Sample Density: 3.845e+15 molecules/cm²
 Sample dispersion constant: 6.036e-59

Density conversion factor: 0,0015468

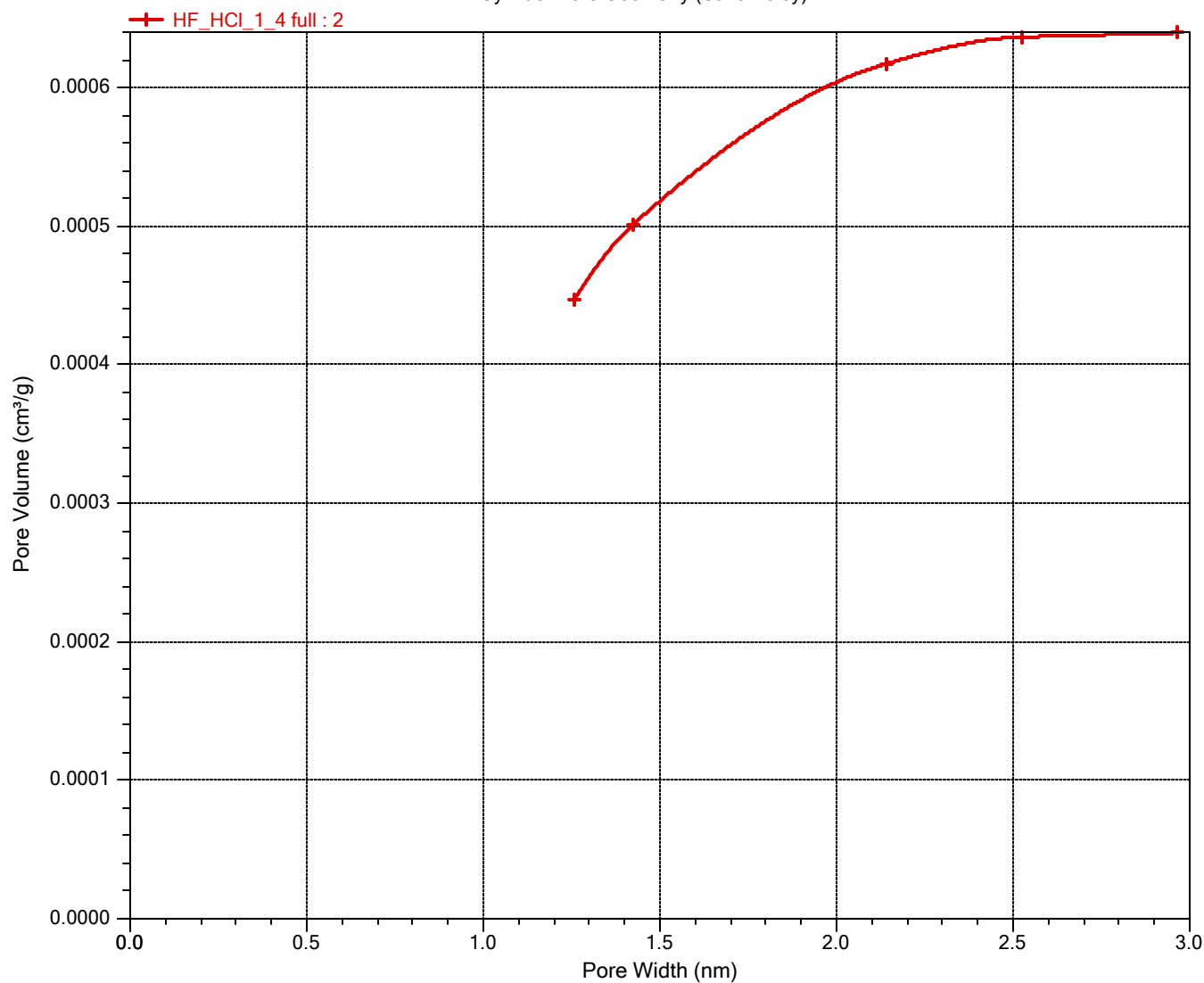
Absolute Pressure (kPa)	Relative Pressure (p/p°)	Quantity Adsorbed (cm ³ /g STP)	Pore Width (nm)	Cumulative Pore Volume (cm ³ /g)	Smoothed Differential Pore Volume (cm ³ /g·nm)
0.55409	0.005526755	0.28897	1.256	0.0004	0.0004
1.20227	0.011950006	0.32400	1.424	0.0005	0.0003
6.92497	0.068824382	0.39905	2.143	0.0006	0.0001
11.08790	0.110181308	0.41146	2.526	0.0006	0.0000
16.11846	0.160165803	0.41341	2.967	0.0006	0.0000

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Automatic degas:	No		

Horvath-Kawazoe Cumulative Pore Volume Plot

Cylinder Pore Geometry (Saito-Foley)

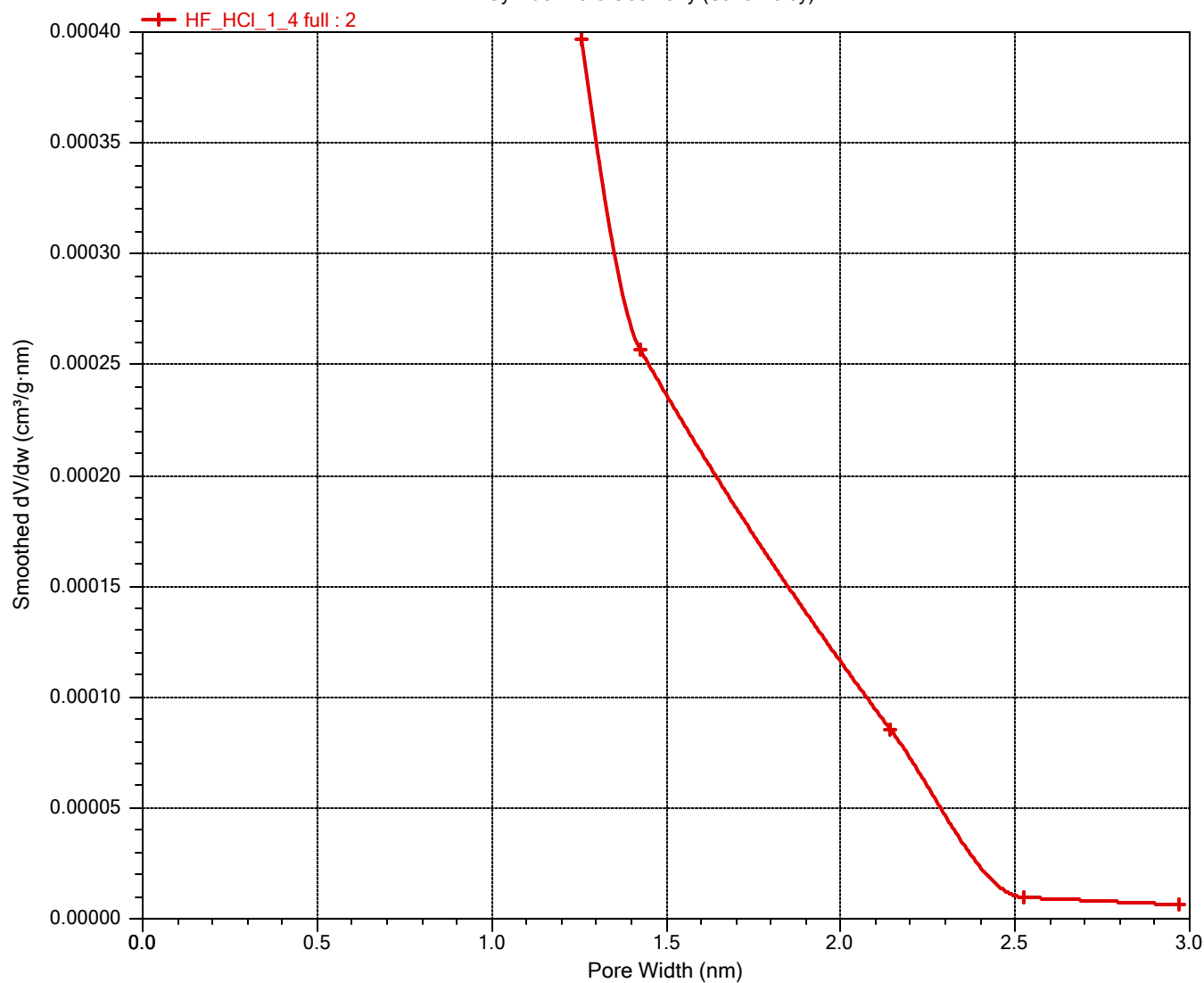


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Automatic degas:	No		

Horvath-Kawazoe Differential Pore Volume Plot

Cylinder Pore Geometry (Saito-Foley)



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Porosity Distribution by
 Model: N2 - Cylindrical Pores - Oxide Surface
 Method: Non-negative Regularization: 0,01000
 Standard Deviation of Fit: 0,04237 cm³/g STP

Volume in Pores	<	1,594 nm	0,00044 cm ³ /g
Total Volume in Pores	<=	18,466 nm	0,00098 cm ³ /g
Area in Pores	>	18,466 nm	0,000 m ² /g
Total Area in Pores	>=	1,594 nm	0,149 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)
1.594	0.00044	0.00000	0.000	0.000
1.630	0.00044	0.00000	0.000	0.000
1.666	0.00044	0.00000	0.000	0.000
1.702	0.00044	0.00000	0.000	0.000
1.737	0.00044	0.00000	0.000	0.000
1.773	0.00044	0.00000	0.000	0.000
1.809	0.00044	0.00000	0.000	0.000
1.844	0.00044	0.00000	0.000	0.000
1.880	0.00044	0.00000	0.000	0.000
1.916	0.00044	0.00000	0.000	0.000
1.952	0.00044	0.00000	0.000	0.000
1.987	0.00044	0.00000	0.000	0.000
2.023	0.00044	0.00000	0.000	0.000
2.059	0.00044	0.00000	0.000	0.000
2.095	0.00044	0.00000	0.000	0.000
2.130	0.00044	0.00000	0.000	0.000
2.166	0.00044	0.00000	0.000	0.000
2.238	0.00044	0.00000	0.000	0.000
2.309	0.00044	0.00000	0.000	0.000
2.381	0.00044	0.00000	0.000	0.000
2.452	0.00044	0.00000	0.000	0.000
2.524	0.00044	0.00000	0.000	0.000
2.595	0.00044	0.00000	0.000	0.000
2.667	0.00044	0.00000	0.000	0.000
2.738	0.00044	0.00000	0.000	0.000
2.810	0.00044	0.00000	0.000	0.000
2.881	0.00044	0.00000	0.000	0.000
2.953	0.00044	0.00000	0.000	0.000
3.024	0.00044	0.00000	0.000	0.000
3.096	0.00044	0.00000	0.000	0.000
3.167	0.00044	0.00000	0.000	0.000

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Automatic degas:	No		

Pore Width (nm)	Cumulative Pore Volume (cm ³ /g)	Pore Table		
		Incremental Pore Volume (cm ³ /g)	Cumulative Pore Area (m ² /g)	Incremental Pore Area (m ² /g)
3.239	0.00044	0.00000	0.000	0.000
3.310	0.00044	0.00000	0.000	0.000
3.382	0.00044	0.00000	0.000	0.000
3.453	0.00044	0.00000	0.000	0.000
3.525	0.00044	0.00000	0.000	0.000
3.596	0.00044	0.00000	0.000	0.000
3.668	0.00044	0.00000	0.000	0.000
3.739	0.00044	0.00000	0.000	0.000
3.811	0.00044	0.00000	0.000	0.000
3.882	0.00044	0.00000	0.000	0.000
3.954	0.00044	0.00000	0.000	0.000
4.025	0.00044	0.00000	0.000	0.000
4.096	0.00044	0.00000	0.000	0.000
4.168	0.00044	0.00000	0.000	0.000
4.239	0.00044	0.00000	0.000	0.000
4.311	0.00044	0.00000	0.000	0.000
4.382	0.00044	0.00000	0.000	0.000
4.454	0.00044	0.00000	0.000	0.000
4.525	0.00044	0.00000	0.000	0.000
4.597	0.00044	0.00000	0.000	0.000
4.668	0.00044	0.00000	0.000	0.000
4.740	0.00044	0.00000	0.000	0.000
4.811	0.00044	0.00000	0.000	0.000
4.883	0.00044	0.00000	0.000	0.000
4.954	0.00044	0.00000	0.000	0.000
5.026	0.00044	0.00000	0.000	0.000
5.205	0.00044	0.00000	0.000	0.000
5.491	0.00044	0.00000	0.000	0.000
5.777	0.00044	0.00000	0.000	0.000
6.098	0.00044	0.00000	0.000	0.000
6.420	0.00044	0.00000	0.000	0.000
6.742	0.00044	0.00000	0.000	0.000
7.099	0.00044	0.00000	0.000	0.000
7.457	0.00044	0.00000	0.000	0.000
7.850	0.00044	0.00000	0.000	0.000
8.279	0.00044	0.00000	0.000	0.000
8.708	0.00044	0.00000	0.000	0.000
9.137	0.00044	0.00000	0.000	0.000
9.637	0.00044	0.00000	0.000	0.000
10.138	0.00044	0.00000	0.000	0.000
10.638	0.00044	0.00000	0.000	0.000

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11.210	0.00044	0.00000	0.000	0.000
11.782	0.00049	0.00004	0.015	0.015
12.390	0.00053	0.00004	0.029	0.013
13.033	0.00058	0.00005	0.045	0.017
13.676	0.00065	0.00006	0.064	0.019
14.391	0.00072	0.00008	0.085	0.021
15.106	0.00079	0.00007	0.103	0.018
15.893	0.00090	0.00011	0.130	0.027
16.715	0.00098	0.00008	0.149	0.019
17.573	0.00098	0.00000	0.149	0.000
18.466	0.00098	0.00000	0.149	0.000

Sample: ²
 Operator:
 Submitter:
 File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
 Szcz... \HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
Completed:	15.03.2023 02:52:01	Analysis bath temp.:	77,300 K
Report time:	19.10.2023 09:08:36	Thermal correction:	Yes
Sample mass:	0,6800 g	Ambient free space:	28,5373 cm ³ Entered
Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Porosity Distribution by
 Model: N2 - Cylindrical Pores - Oxide Surface
 Method: Non-negative Regularization: 0,01000
 Standard Deviation of Fit: 0,04237 cm³/g STP

Isotherm Table				
Relative Pressure (p/p°)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.006309579	0.2948	0.3295	-0.0348	-0.117926
0.007943276	0.3060	0.3308	-0.0249	-0.081313
0.010000000	0.3174	0.3322	-0.0149	-0.046837
0.012355640	0.3249	0.3335	-0.0086	-0.026574
0.015186320	0.3308	0.3348	-0.0040	-0.012053
0.018485530	0.3374	0.3360	0.0014	0.004216
0.022294740	0.3448	0.3373	0.0075	0.021859
0.026653420	0.3527	0.3385	0.0143	0.040440
0.031598160	0.3611	0.3397	0.0214	0.059301
0.037162240	0.3696	0.3409	0.0288	0.077838
0.043374470	0.3781	0.3421	0.0360	0.095249
0.050259210	0.3860	0.3432	0.0427	0.110685
0.057835260	0.3928	0.3444	0.0484	0.123200
0.066115920	0.3979	0.3456	0.0524	0.131614
0.075109080	0.4014	0.3467	0.0547	0.136329
0.084815920	0.4051	0.3477	0.0573	0.141517
0.095232370	0.4086	0.3488	0.0598	0.146299
0.106348200	0.4110	0.3498	0.0612	0.148905
0.118147500	0.4121	0.3509	0.0612	0.148431
0.130609100	0.4131	0.3521	0.0610	0.147689
0.143706600	0.4134	0.3533	0.0601	0.145480
0.157410500	0.4134	0.3545	0.0589	0.142468
0.171685500	0.4125	0.3558	0.0567	0.137521
0.186492100	0.4111	0.3570	0.0541	0.131528
0.201792100	0.4092	0.3583	0.0510	0.124548
0.217539500	0.4068	0.3595	0.0473	0.116295
0.233689500	0.4041	0.3608	0.0434	0.107321
0.250196100	0.4012	0.3620	0.0392	0.097647
0.267011800	0.3979	0.3633	0.0347	0.087135
0.284089500	0.3943	0.3645	0.0298	0.075604
0.301380300	0.3902	0.3658	0.0245	0.062670
0.318838200	0.3856	0.3670	0.0185	0.048073
0.336417100	0.3802	0.3683	0.0119	0.031363
0.354071100	0.3737	0.3695	0.0041	0.011029
0.371757900	0.3672	0.3708	-0.0036	-0.009862

Sample: ²
 Operator:
 Submitter:
 File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
 Szcz... \HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

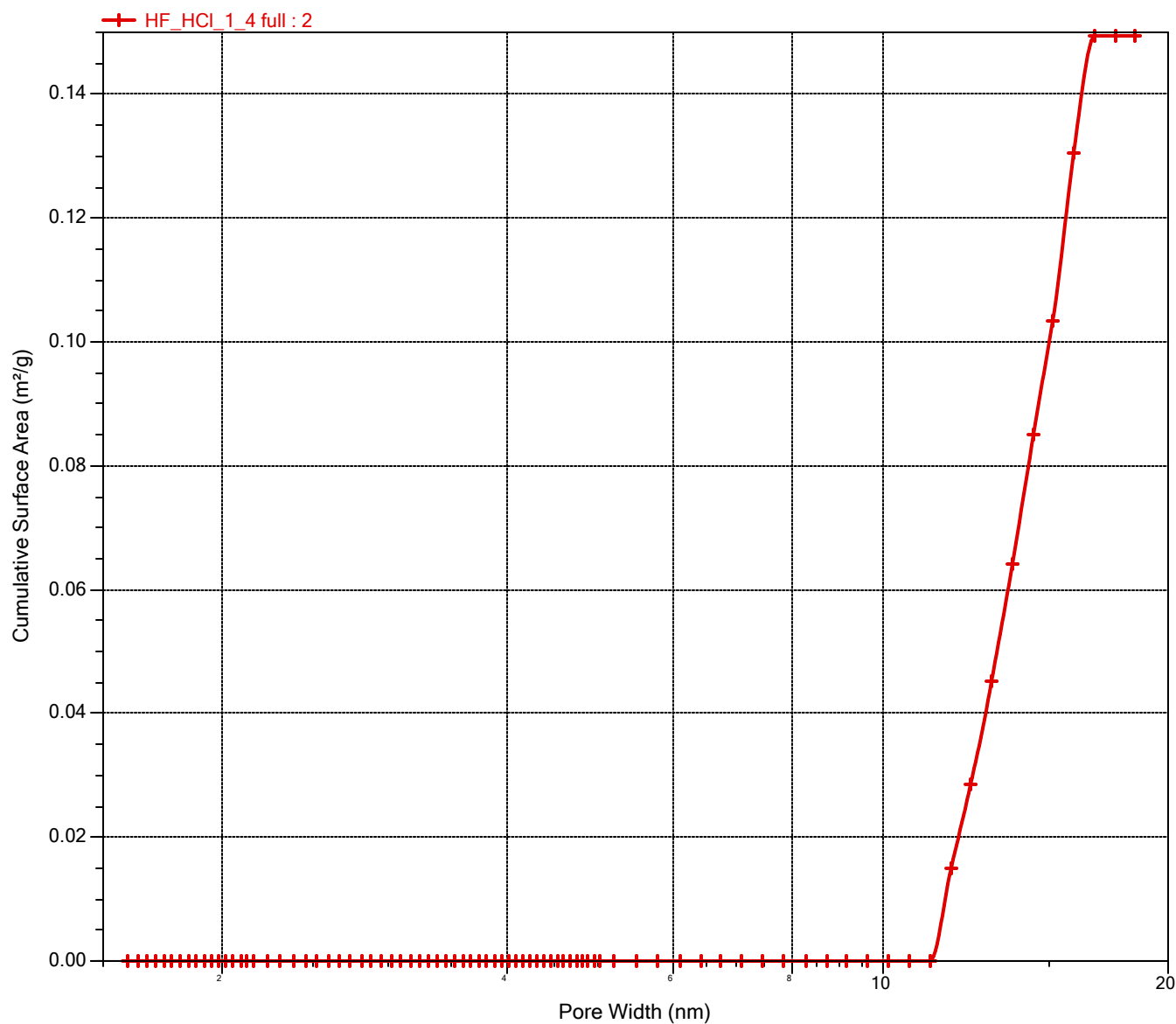
Isotherm Table

Relative Pressure (p/p°)	Experimental Quantity Adsorbed (cm ³ /g STP)	Fitted Quantity Adsorbed (cm ³ /g STP)	Absolute Residual (cm ³ /g STP)	Relative Residual
0.389435500	0.3620	0.3721	-0.0100	-0.027674
0.407065800	0.3574	0.3733	-0.0159	-0.044533
0.424610500	0.3528	0.3746	-0.0219	-0.061941
0.442034200	0.3479	0.3760	-0.0281	-0.080731
0.459305300	0.3429	0.3773	-0.0344	-0.100367
0.476393400	0.3379	0.3786	-0.0407	-0.120389
0.493271100	0.3332	0.3800	-0.0467	-0.140285
0.509911800	0.3290	0.3814	-0.0524	-0.159304
0.526293400	0.3253	0.3828	-0.0575	-0.176652
0.542394700	0.3228	0.3842	-0.0614	-0.190289
0.558200000	0.3216	0.3857	-0.0640	-0.199127
0.573690800	0.3210	0.3871	-0.0662	-0.206140
0.588853900	0.3207	0.3886	-0.0679	-0.211728
0.603677600	0.3207	0.3900	-0.0694	-0.216298
0.618153900	0.3207	0.3915	-0.0708	-0.220874
0.632272400	0.3211	0.3930	-0.0719	-0.223817
0.646028900	0.3244	0.3945	-0.0701	-0.216021
0.659417100	0.3296	0.3959	-0.0664	-0.201321
0.672435500	0.3356	0.3974	-0.0619	-0.184374
0.685081600	0.3415	0.3989	-0.0574	-0.168021
0.697355300	0.3483	0.4005	-0.0521	-0.149635
0.709256600	0.3560	0.4020	-0.0460	-0.129316
0.720789500	0.3643	0.4035	-0.0393	-0.107831
0.731953900	0.3733	0.4051	-0.0318	-0.085259
0.742756600	0.3858	0.4067	-0.0209	-0.054299
0.753200000	0.4007	0.4083	-0.0076	-0.018992
0.763289500	0.4159	0.4100	0.0059	0.014302
0.773030300	0.4298	0.4296	0.0002	0.000451
0.782430300	0.4445	0.4312	0.0133	0.029982
0.791496100	0.4622	0.4499	0.0123	0.026644
0.800232900	0.4847	0.4740	0.0107	0.022047
0.808648700	0.5133	0.5030	0.0103	0.020108
0.816752600	0.5457	0.5367	0.0090	0.016500
0.824552600	0.5769	0.5683	0.0086	0.014941
0.832053900	0.6069	0.6171	-0.0102	-0.016846
0.839267100	0.6358	0.6176	0.0182	0.028605
0.846200000	0.6635	0.6539	0.0096	0.014480
0.852860500	0.6902	0.6541	0.0360	0.052188
0.859257900	0.7157	0.6544	0.0614	0.085767

Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz...\\HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
Completed:	15.03.2023 02:52:01	Analysis bath temp.:	77,300 K
Report time:	19.10.2023 09:08:36	Thermal correction:	Yes
Sample mass:	0,6800 g	Ambient free space:	28,5373 cm ³ Entered
Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

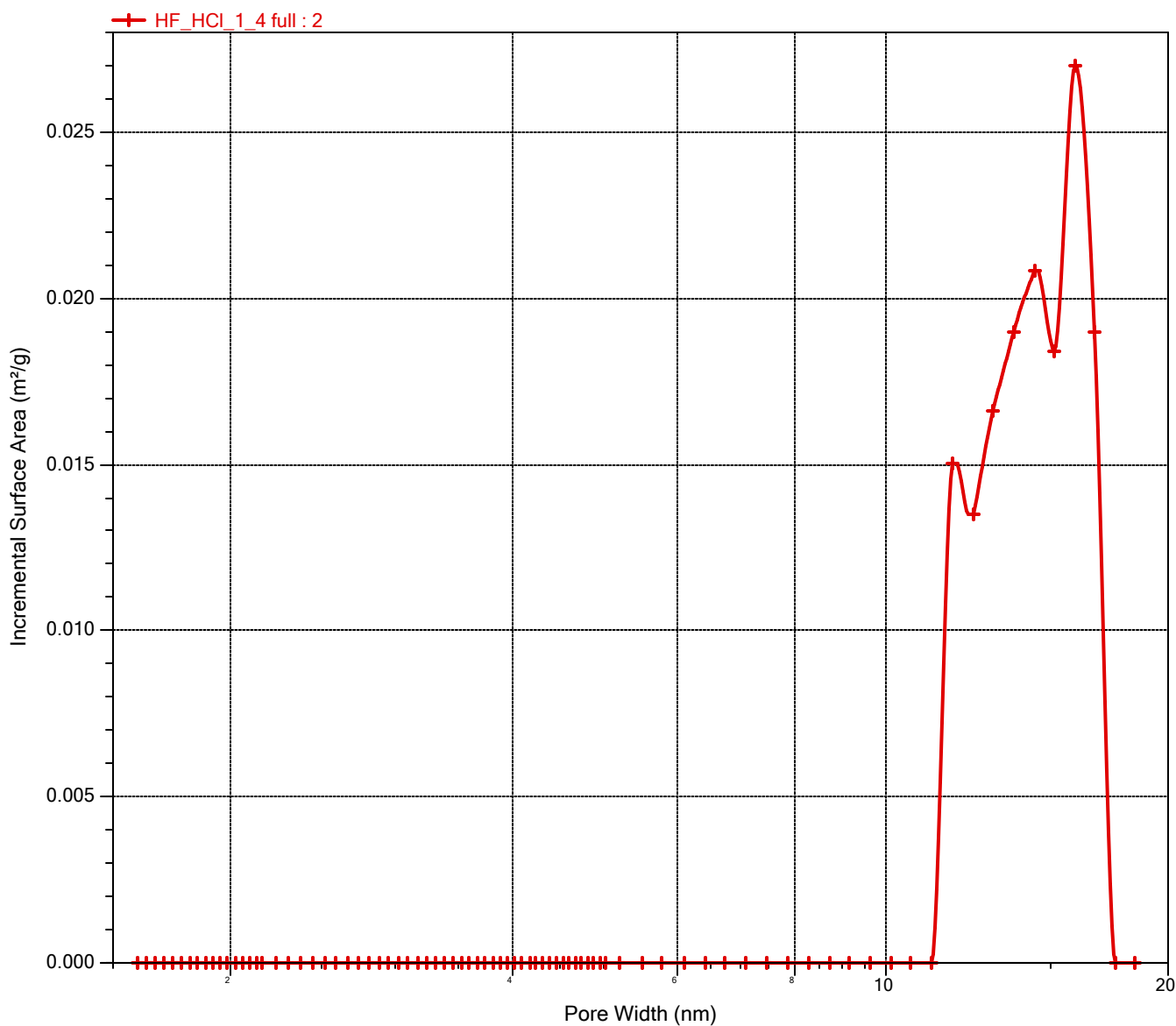
Cumulative Surface Area vs. Pore Width



Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz... \HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Incremental Surface Area vs. Pore Width



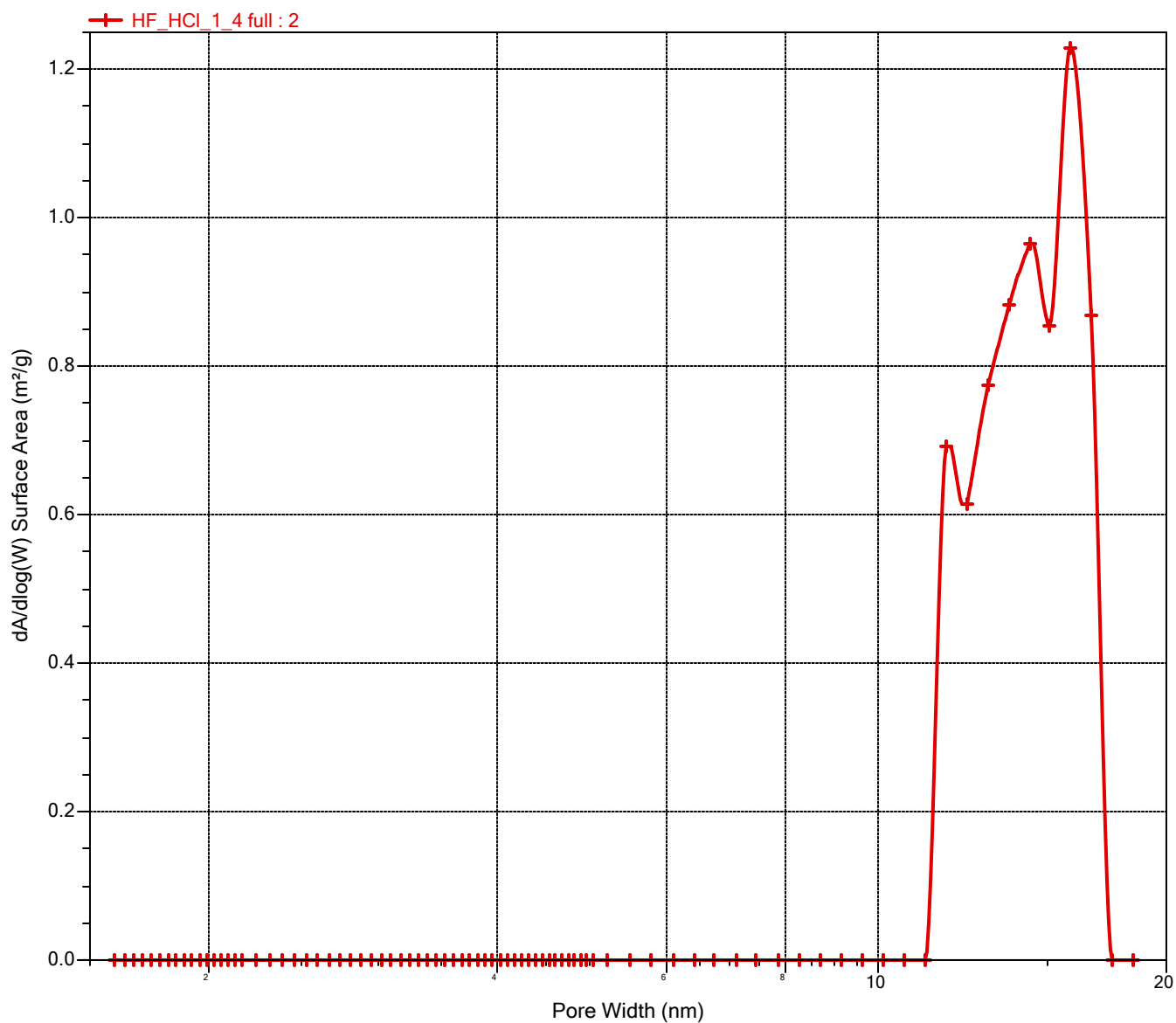
Sample: ²
Operator:
Submitter:

File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz... \HF_HCl_1_4 full.SMP

Started: 14.03.2023 14:41:36
Completed: 15.03.2023 02:52:01
Report time: 19.10.2023 09:08:36
Sample mass: 0,6800 g
Analysis free space: 84,8327 cm³
Low pressure dose: 1,0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: 77,300 K
Thermal correction: Yes
Ambient free space: 28,5373 cm³ Entered
Equilibration interval: 30 s
Sample density: 1,000 g/cm³

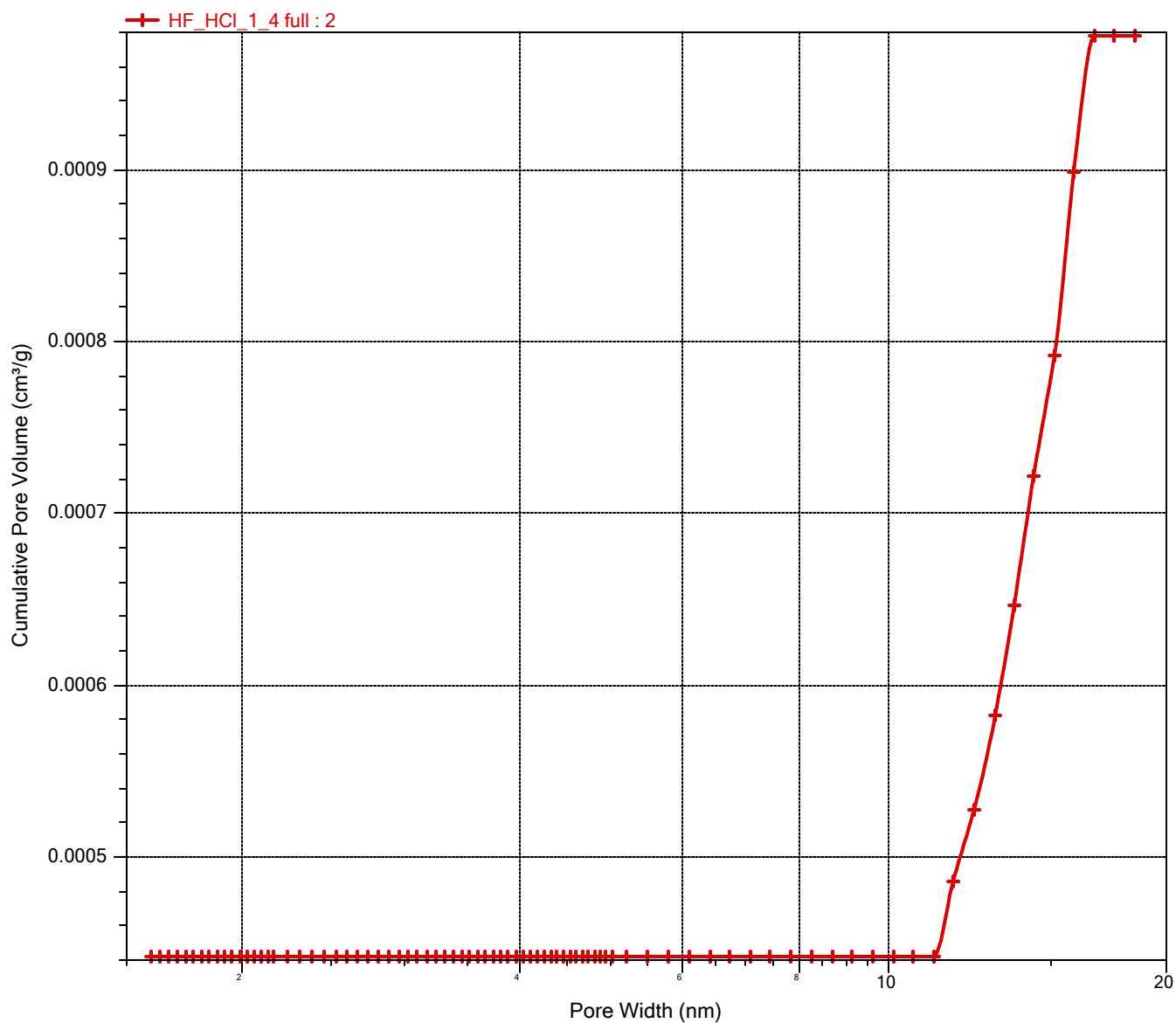
dA/dlog(W) Surface Area vs. Pore Width



Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz... \HF_HCl_1_4 full.SMP

Started:	14.03.2023 14:41:36	Analysis adsorptive:	N2
Completed:	15.03.2023 02:52:01	Analysis bath temp.:	77,300 K
Report time:	19.10.2023 09:08:36	Thermal correction:	Yes
Sample mass:	0,6800 g	Ambient free space:	28,5373 cm ³ Entered
Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Cumulative Pore Volume vs. Pore Width



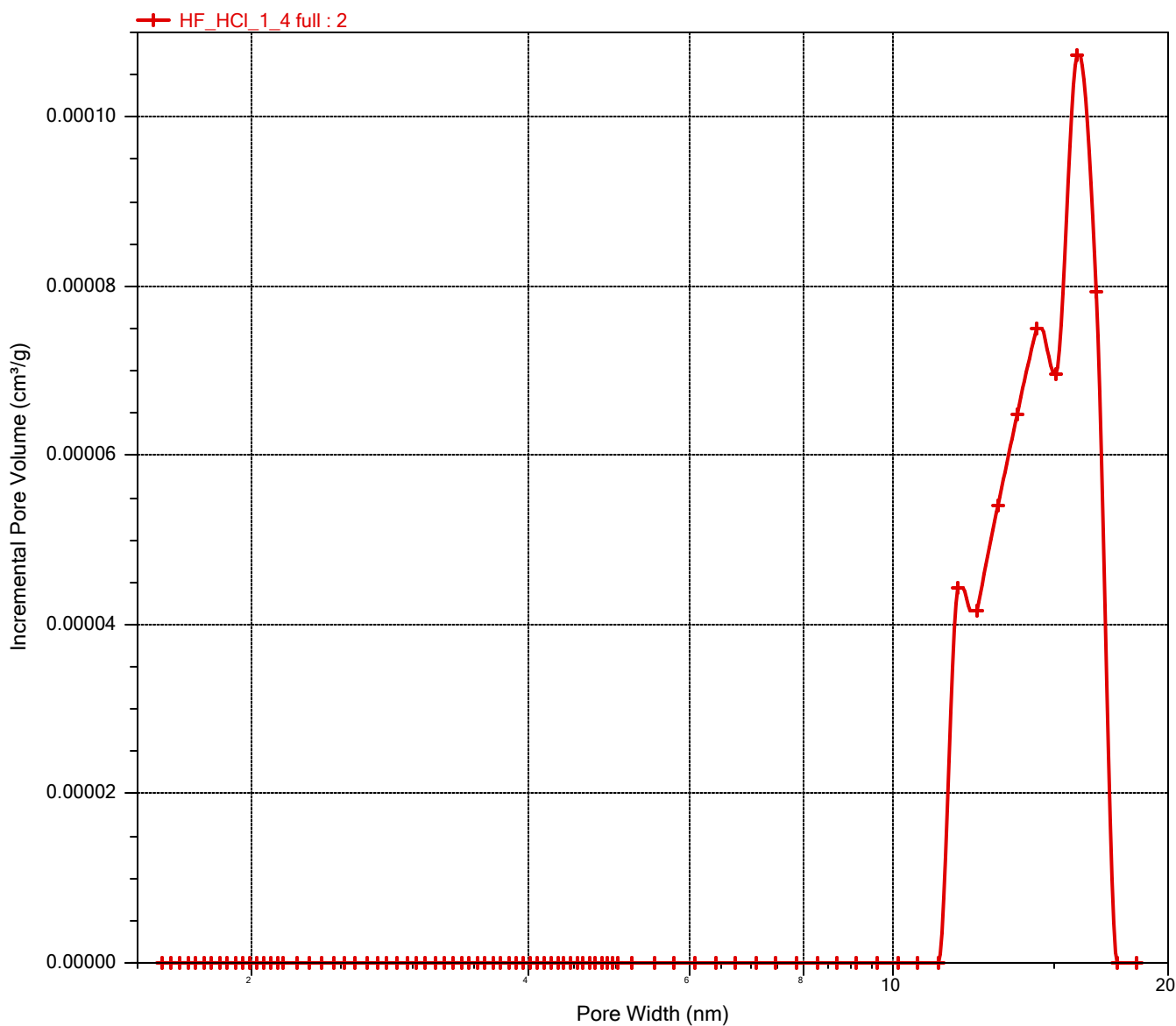
Sample: ²
Operator:
Submitter:

File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz... \HF_HCl_1_4 full.SMP

Started: 14.03.2023 14:41:36
Completed: 15.03.2023 02:52:01
Report time: 19.10.2023 09:08:36
Sample mass: 0,6800 g
Analysis free space: 84,8327 cm³
Low pressure dose: 1,0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: 77,300 K
Thermal correction: Yes
Ambient free space: 28,5373 cm³ Entered
Equilibration interval: 30 s
Sample density: 1,000 g/cm³

Incremental Pore Volume vs. Pore Width



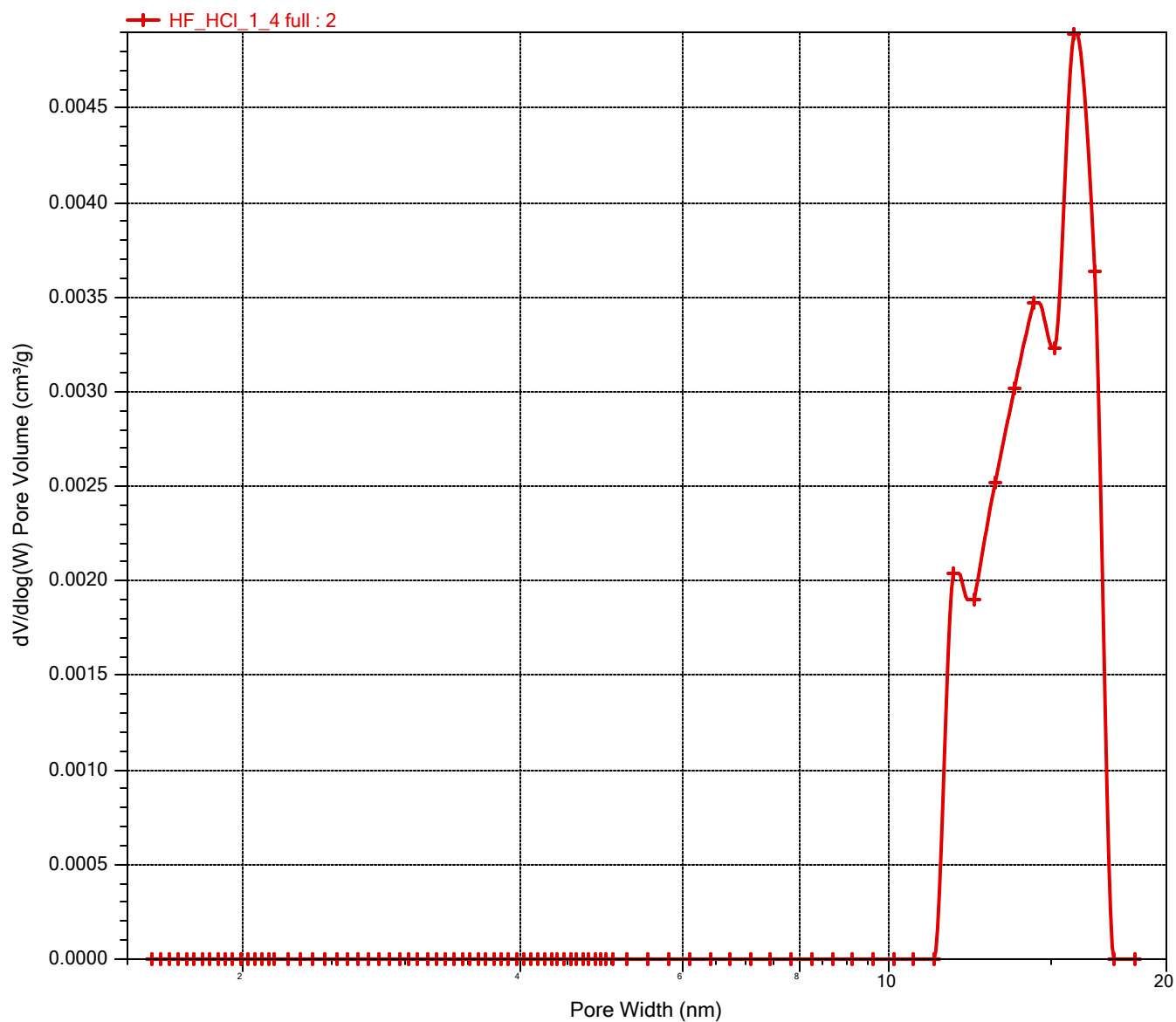
Sample: ²
Operator:
Submitter:

File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
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Started: 14.03.2023 14:41:36
Completed: 15.03.2023 02:52:01
Report time: 19.10.2023 09:08:36
Sample mass: 0,6800 g
Analysis free space: 84,8327 cm³
Low pressure dose: 1,0000 cm³/g STP
Automatic degas: No

Analysis adsorptive: N₂
Analysis bath temp.: 77,300 K
Thermal correction: Yes
Ambient free space: 28,5373 cm³ Entered
Equilibration interval: 30 s
Sample density: 1,000 g/cm³

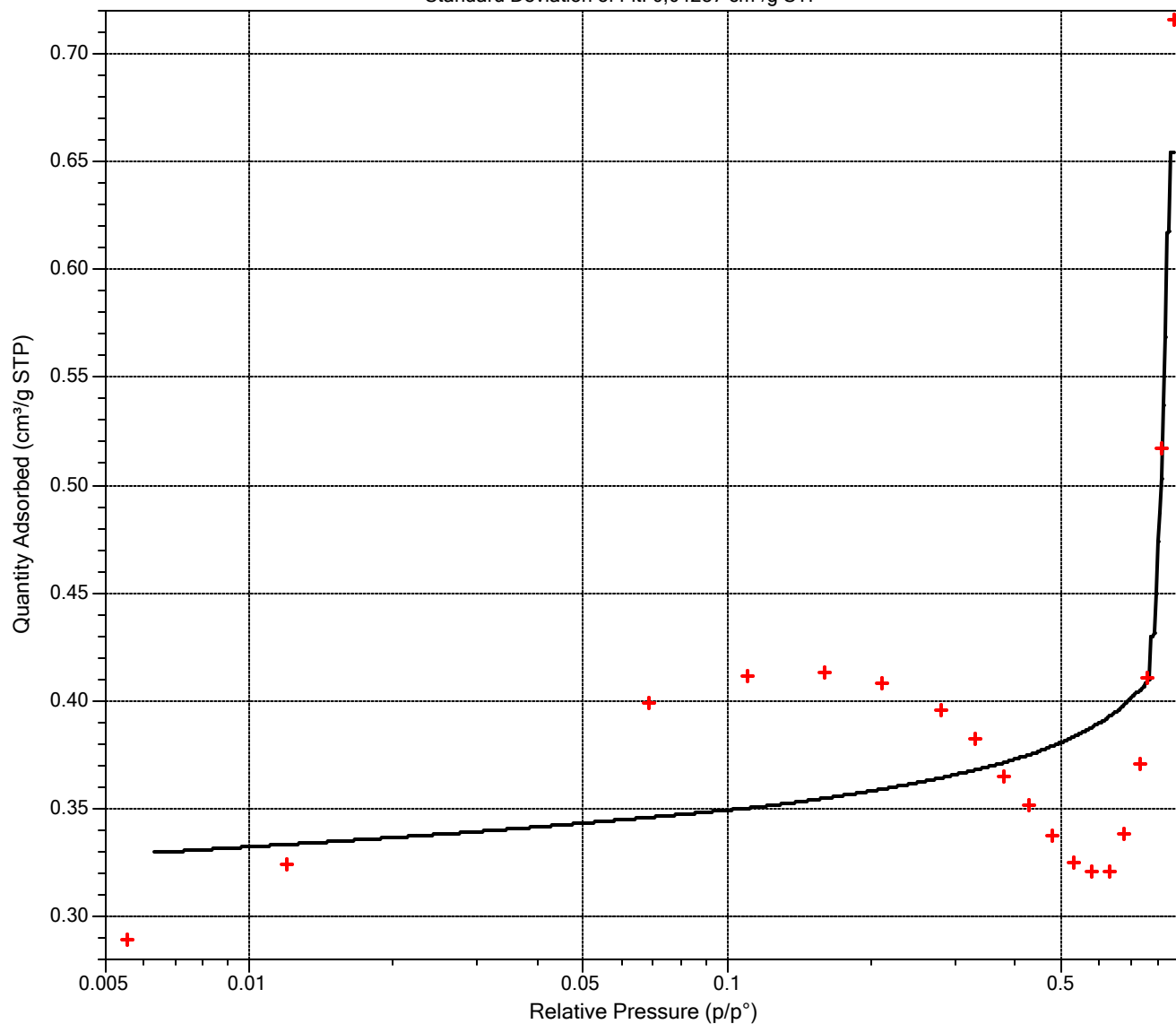
dV/dlog(W) Pore Volume vs. Pore Width



Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz...\\HF_HCl_1_4 full.SMP

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Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

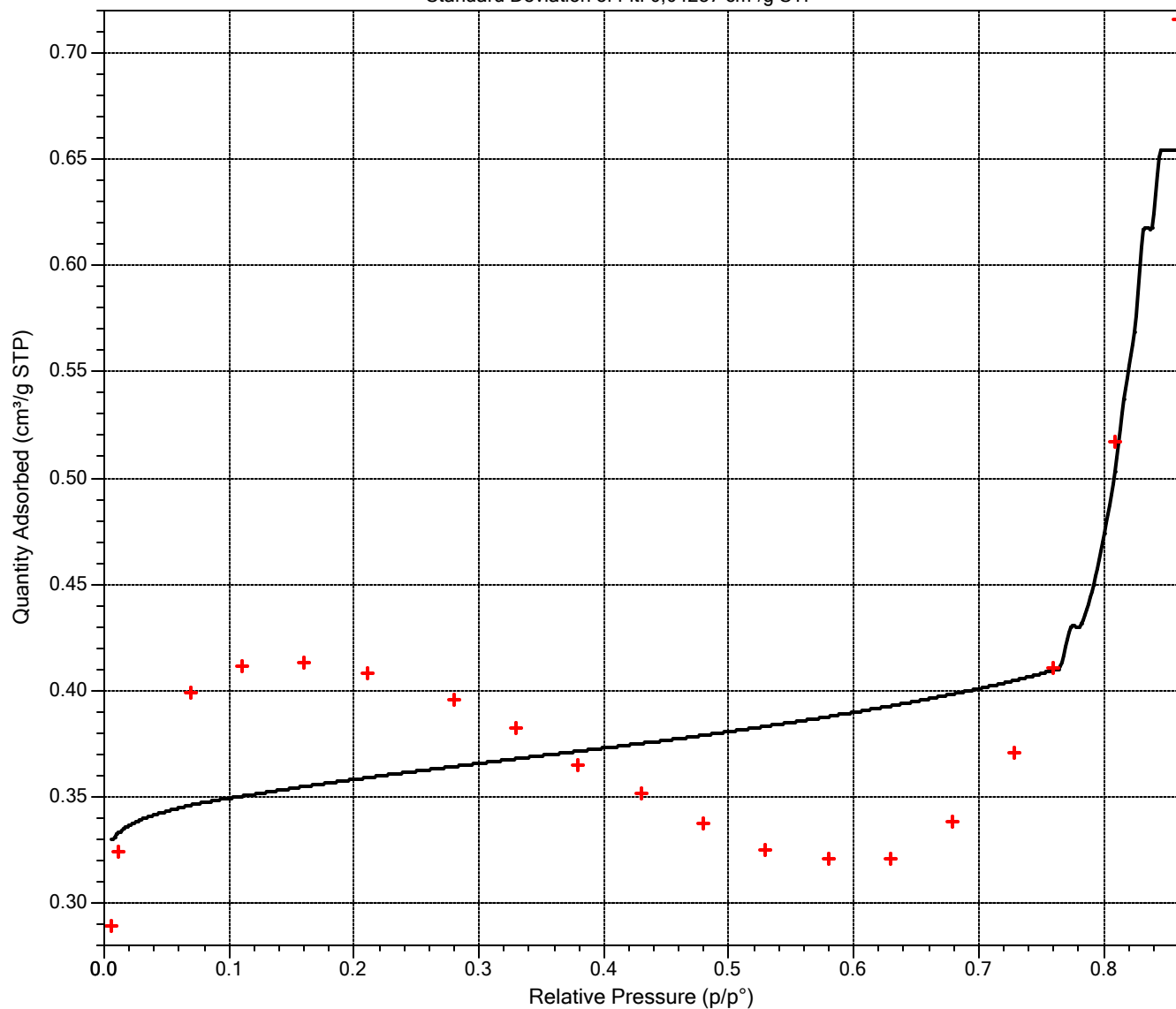
Goodness of Fit

Standard Deviation of Fit: 0,04237 cm³/g STP


Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Goodness of Fit

Standard Deviation of Fit: 0,04237 cm³/g STP


Sample: ²
 Operator:
 Submitter:
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Sample mass:	0,6800 g	Ambient free space:	28,5373 cm ³ Entered
Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Sample Information

Method: FULL- N2@77K- ADS/DES
 Sample: ²
 Operator:
 Submitter:
 Mass type: Entered
 Sample mass: 0,6800 g
 Density: 1,000 g/cm³
 Type of data: Automatically collected
 Instrument type: 2460
 Original instrument type: 2460
 Comments:

Sample Tube

Sample tube: W1
 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: FULL- N2@77K- ADS/DES

Smart VacPrep evacuation
 Backfill sample tube: Automatic
 Evacuation rate: 0,27 kPa/s
 Unrest. evacuation from: 0,27 kPa
 Vacuum level: 7e-02 kPa
 Evacuation time: 60 min
 Temperature ramp rate: 10,0 K/min
 Target temperature: 363 K
 Hold pressure: 13,3 kPa

Heating Phase

Sample prep: Stage	Temperature (K)	Ramp Rate (K/min)	Time (min)
1	523	10,0	720

Analysis Conditions

Sample: ²
 Operator:
 Submitter:
 File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
 Szcz... \HF_HCl_1_4 full.SMP

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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Analysis conditions: FULL- N2@77K- ADS/DES
 Isotherm collection: Target Pressure
 Absolute pressure dosing: No

Pressure Table		
Starting Pressure (p/p°)	Pressure Increment (p/p°)	Ending Pressure (p/p°)
0,000000000		0,010000000
0,010000000	0,050000000	0,995000000
0,995000000	0,100000000	0,150000000

Preparation
 Fast evacuation: No
 Evacuation rate: 0,27 kPa/s
 Unrestricted evacuation from: 0,27 kPa
 Vacuum setpoint: 1,3 Pa
 Evacuation time: 4,00 h

Leak test: No
 Use TranSeal: No

Free Space
 Entered
 Ambient free space: 28,5373 cm³
 Analysis free space: 84,8327 cm³

p° and Temperature
 p° type: Measured in Psat tube for each point
 Temperature type: Entered
 Temperature: 77,300 K

Dosing
 Use first pressure fixed dose: No
 Use maximum volume increment: No
 Target tolerance: 5.0% or 0,6666 kPa
 Low pressure dosing: Yes
 Dose amount: 1,0000 cm³/g STP
 Minimum equilibration delay: 0,50 h
 Maximum equilibration delay: 2,00 h
 Maximum number of decants: ⁶

Sample: ²
 Operator:
 Submitter:
 File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

	Equilibration Relative Pressure (p/p°)	Equilibration Interval (s)
1	1,000000000	30

Minimum equilibration delay at p/p° >= 0.995: 600 s

Sample Backfill

Backfill at start of analysis: Yes
 Backfill at end of analysis: Yes
 Backfill gas: N2

Adsorptive Properties

Adsorptive: Nitrogen @ 77.35 K (N2)
 Non-condensing adsorptive: No
 Maximum manifold pressure: 123,323 kPa
 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 (kPa)	Temperature (K)
1	80,0192	75,40
2	84,5947	75,85
3	89,9104	76,35
4	96,0481	76,90
5	98,9411	77,15
6	101,3028	77,35
7	103,7071	77,55
8	107,3945	77,85
9	113,7597	78,35
10	120,4064	78,85

Report Options

Inside diameter of sample tube: 9,53 mm

Sample: ²
Operator:
Submitter:
File: C:\Users\barto\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w
Szcz...\\HF_HCl_1_4 full.SMP

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Analysis free space:	84,8327 cm ³	Equilibration interval:	30 s
Low pressure dose:	1,0000 cm ³ /g STP	Sample density:	1,000 g/cm ³
Automatic degas:	No		

Sample Log

Date	Time	Log Message
14.03.2023	14:41:36	Starting a sample analysis for C:\ASAP 2460\data\2023\Bartek\2full.SMP on port 2.
14.03.2023	19:47:35	Low pressure data collection started
14.03.2023	23:24:42	Standard data collection started.
15.03.2023	02:28:45	Termination started.
15.03.2023	02:52:01	Finished a sample analysis for C:\ASAP 2460\data\2023\Bartek\2full.SMP on port 2.