

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULLL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## Summary Report

## Surface Area

BET Surface Area: 18,3015 m<sup>2</sup>/gt-Plot Micropore Area: 9,9818 m<sup>2</sup>/gt-Plot external surface area: 8,3197 m<sup>2</sup>/g

## DFT Pore Size

Volume in Pores	<	5,58 Å	0,00025 cm <sup>3</sup> /g
Total Volume in Pores	<=	203,97 Å	0,01697 cm <sup>3</sup> /g
Area in Pores	>	203,97 Å	0,000 m <sup>2</sup> /g
Total Area in Pores	>=	5,58 Å	17,699 m <sup>2</sup> /g

## Horvath-Kawazoe

Maximum pore volume at p/p° = 0,160006051: 0,007620 cm<sup>3</sup>/g

Median pore width: 10,718 Å

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Automatic degas:	No		

## Isotherm Tabular Report

Relative Pressure (p/p°)	Absolute Pressure (kPa)	Quantity Adsorbed (mmol/g)	Elapsed Time (h:min)	Saturation Pressure (kPa)
			05:05	101.7027274
0.000000504	0.0000512	0.00699	07:48	101.7636111
0.000001300	0.0001322	0.01420	09:56	101.7150962
0.000003563	0.0003622	0.02138	12:25	101.6642214
0.000008612	0.0008745	0.02849	14:34	101.5387028
0.000018126	0.0018387	0.03550	16:21	101.4368231
0.000033343	0.0033777	0.04236	18:18	101.3014338
0.000055361	0.0056019	0.04902	20:25	101.1881456
0.000085116	0.0086882	0.05544	22:39	102.0748242
0.000131112	0.0133739	0.06186	23:56	102.0039397
0.000195370	0.0199030	0.06846	25:22	101.8734165
0.000273671	0.0278335	0.07466	26:33	101.7039724
0.000373537	0.0379547	0.08047	27:52	101.6090420
0.000502272	0.0510246	0.08608	29:13	101.5874943
0.000661597	0.0671887	0.09140	30:35	101.5553843
0.000851131	0.0864089	0.09638	32:07	101.5224443
0.001059738	0.1075227	0.10082	33:50	101.4615607
0.001400882	0.1420938	0.10645	34:25	101.4316722
0.001790346	0.1815899	0.11159	35:18	101.4272292
0.002251864	0.2283243	0.11652	36:19	101.3934510
0.002810117	0.2848064	0.12135	37:00	101.3503637
0.003422222	0.3468016	0.12575	37:39	101.3381333
0.004125672	0.4179112	0.12999	38:18	101.2953145
0.004968461	0.5031617	0.13428	38:49	101.2711303
0.005917823	0.5991664	0.13837	39:14	101.2477761
0.006941344	0.7028256	0.14215	39:37	101.2520889
0.007932398	0.8030782	0.14537	40:05	101.2402735
0.009017041	0.9126771	0.14848	40:29	101.2169193
0.010356844	1.0482245	0.15189	40:59	101.2108081
0.058807336	5.9784384	0.19530	68:49	101.6614385
0.108174458	10.9965398	0.21023	68:56	101.6556040
0.160006051	16.2626434	0.21978	69:03	101.6376774
0.210257497	21.3666926	0.22742	69:10	101.6215492
0.260156647	26.4363635	0.23511	69:17	101.6170980
0.309065080	31.4005398	0.24405	69:25	101.5984716
0.357926015	36.3612556	0.25591	69:32	101.5887475
0.407043332	41.3412346	0.27335	69:40	101.5647016
0.455940285	46.3076282	0.29891	69:50	101.5651166
0.506211158	51.3914399	0.33167	70:00	101.5217445
0.556690234	56.5020030	0.36525	70:10	101.4963072
0.605056722	61.3995018	0.39914	70:20	101.4772657

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Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## Isotherm Tabular Report

Relative Pressure (p/p°)	Absolute Pressure (kPa)	Quantity Adsorbed (mmol/g)	Elapsed Time (h:min)	Saturation Pressure (kPa)
0.655552721	66.5144957	0.43403	70:31	101.4632288
0.706892504	71.6985392	0.46275	70:40	101.4277825
0.757915706	76.8627560	0.47952	70:49	101.4133306
0.807161648	81.8413516	0.48756	70:56	101.3940043
0.873970772	88.5946227	0.49841	71:05	101.3702351
0.906465228	91.8825448	0.50970	71:13	101.3635625
0.956118766	96.8927459	0.55597	71:26	101.3396550
0.991791537	100.4830032	0.64893	71:46	101.3146407
0.890416891	90.1904798	0.52557	72:01	101.2901717
0.784878134	79.5006581	0.50273	72:09	101.2904484
0.679431224	68.8220661	0.49855	72:17	101.2936464
0.580299462	58.7674219	0.49098	72:26	101.2708536
0.493151092	49.9357324	0.41249	72:46	101.2584849
0.394477785	39.9391767	0.27255	72:59	101.2456929
0.297057836	30.0711200	0.24418	73:08	101.2298495
0.181604865	18.3801476	0.22473	73:16	101.2095550
0.132743826	13.4349619	0.21641	73:23	101.2096933

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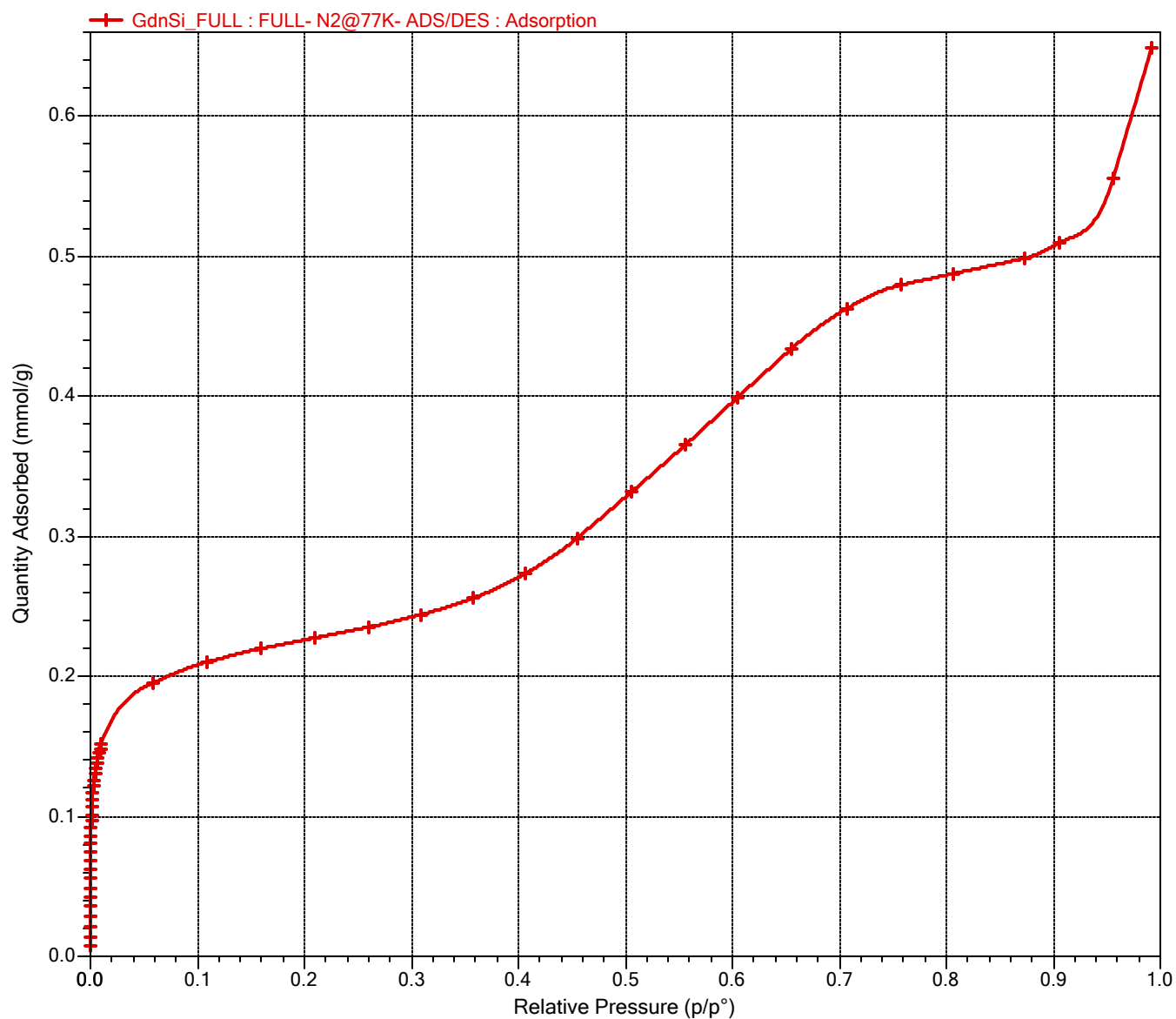
Submitter:

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Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

Isotherm Linear Plot



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

Operator:

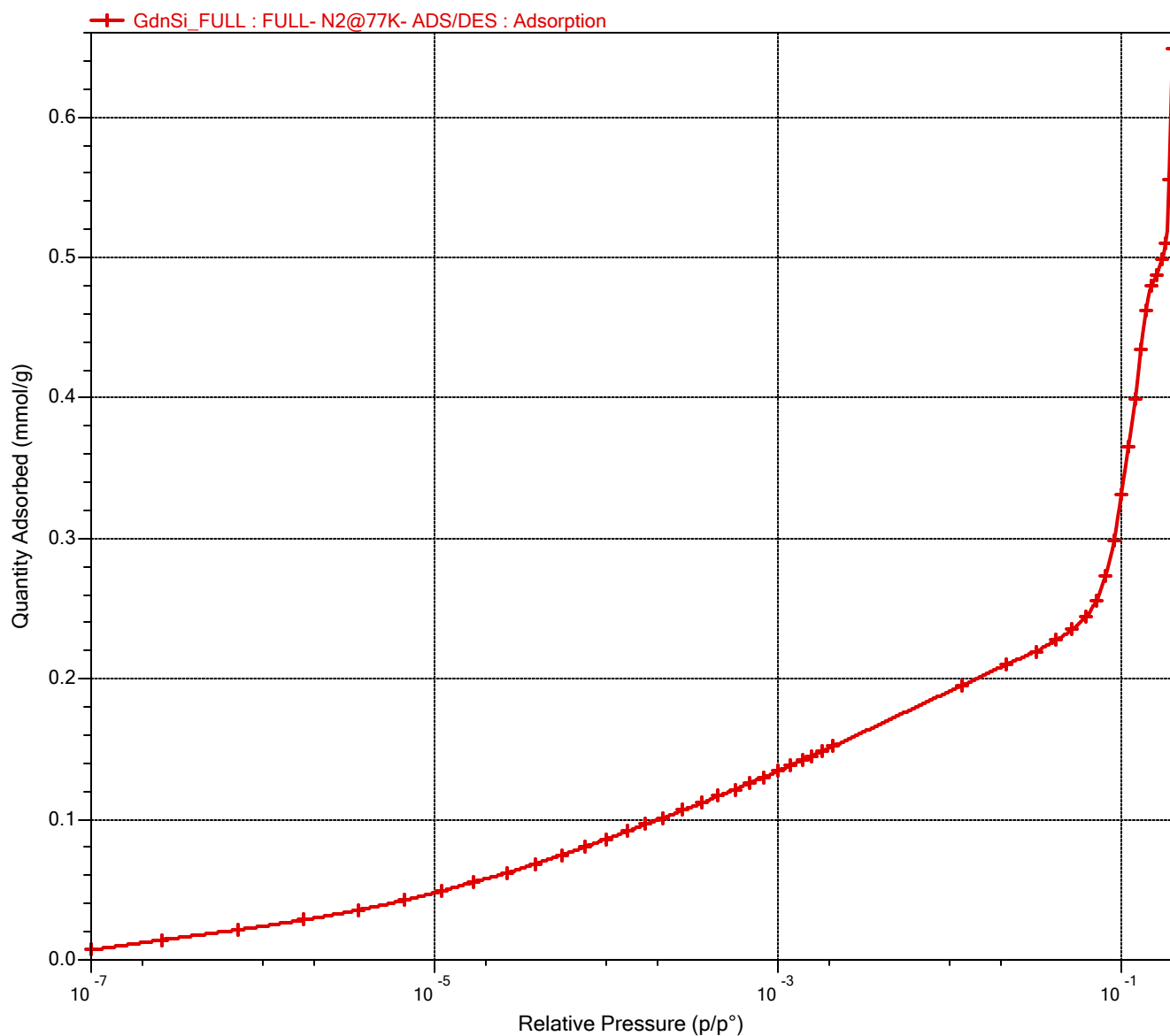
Submitter:

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Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

Isotherm Log Plot



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Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## BET Report

BET surface area: 18,3015 ± 0,1377 m<sup>2</sup>/g  
 Slope: 5,32544 ± 0,04008 g/mmol  
 Y-intercept: 0,00521 ± 0,00091 g/mmol  
 C: 1 022,537713  
 Qm: 0,18759 mmol/g  
 Correlation coefficient: 0,9992078  
 Molecular cross-sectional area: 0,1620 nm<sup>2</sup>

Relative Pressure (p/p°)	Quantity Adsorbed (mmol/g)	1/[Q(p°/p - 1)]
0.000000504	0.00699	0.00007
0.000001300	0.01420	0.00009
0.000003563	0.02138	0.00017
0.000008612	0.02849	0.00030
0.000018126	0.03550	0.00051
0.000033343	0.04236	0.00079
0.000055361	0.04902	0.00113
0.000085116	0.05544	0.00154
0.000131112	0.06186	0.00212
0.000195370	0.06846	0.00285
0.000273671	0.07466	0.00367
0.000373537	0.08047	0.00464
0.000502272	0.08608	0.00584
0.000661597	0.09140	0.00724
0.000851131	0.09638	0.00884
0.001059738	0.10082	0.01052
0.001400882	0.10645	0.01318
0.001790346	0.11159	0.01607
0.002251864	0.11652	0.01937
0.002810117	0.12135	0.02322
0.003422222	0.12575	0.02731
0.004125672	0.12999	0.03187
0.004968461	0.13428	0.03718
0.005917823	0.13837	0.04302
0.006941344	0.14215	0.04917
0.007932398	0.14537	0.05500
0.009017041	0.14848	0.06128
0.010356844	0.15189	0.06890
0.058807336	0.19530	0.31993
0.108174458	0.21023	0.57698

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

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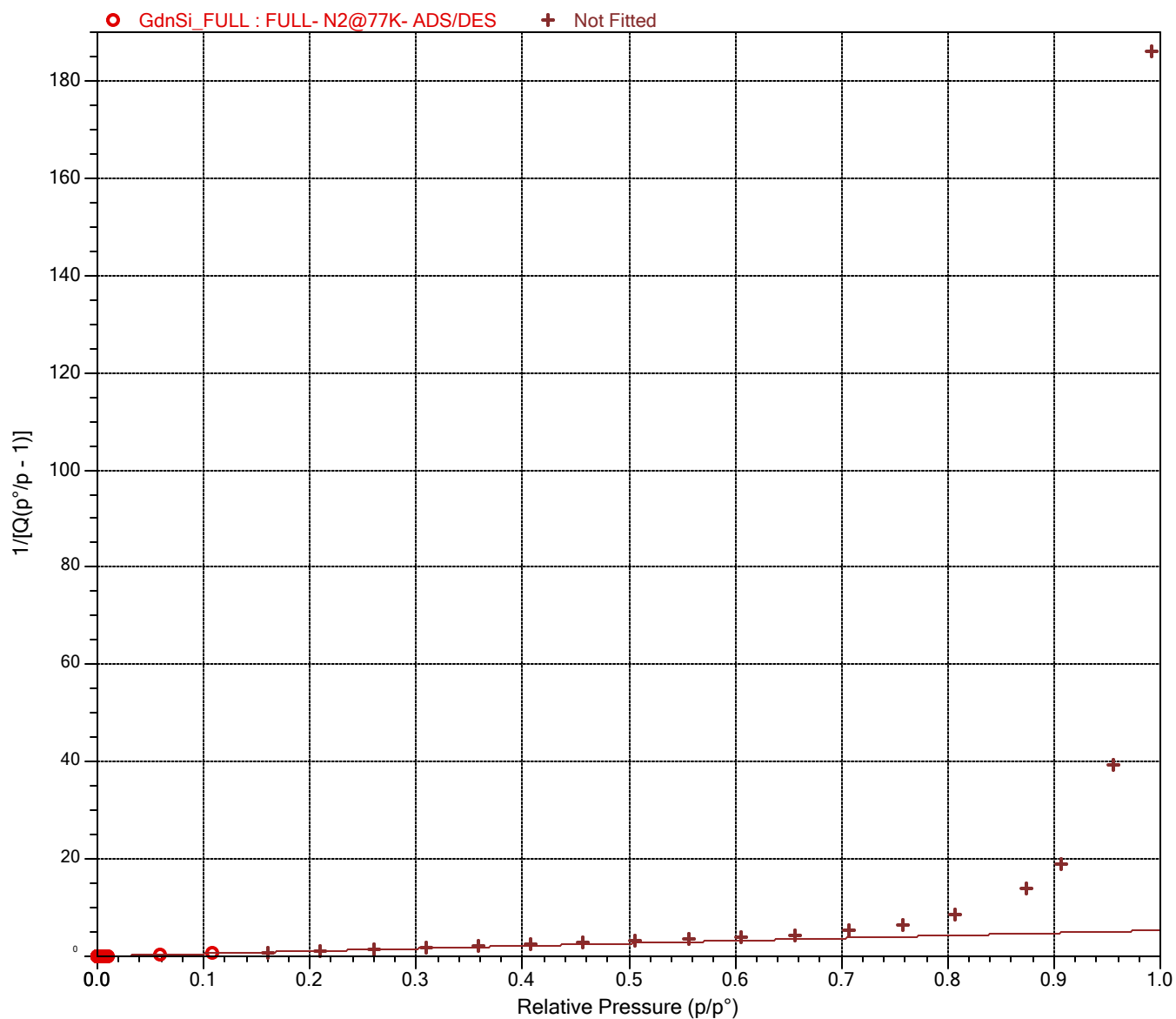
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Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

### BET Surface Area Plot



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Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## t-Plot Report

Micropore volume:	0,004239 cm <sup>3</sup> /g
Micropore area:	9,9818 m <sup>2</sup> /g
External surface area:	8,3197 m <sup>2</sup> /g
Slope:	0,023997 ± 0,000896 mmol/g·Å
Y-intercept:	0,122255 ± 0,003781 mmol/g
Correlation coefficient:	0,998609
Surface area correction factor:	1,000
Density conversion factor:	0,0015468
Total surface area (BET):	18,3015 m <sup>2</sup> /g
Thickness range:	3,5000 to 5,0000 Å
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 (Å)	Quantity Adsorbed (mmol/g)	Fitted
0.058807336	3.3624	0.19530	
0.108174458	3.6880	0.21023	
0.160006051	4.0346	0.21978	
0.210257497	4.3751	0.22742	
0.260156647	4.7176	0.23511	
0.309065080	5.0575	0.24405	
0.357926015	5.4014	0.25591	
0.407043332	5.7512	0.27335	
0.455940285	6.1038	0.29891	
0.506211158	6.4706	0.33167	
0.556690234	6.8434	0.36525	
0.605056722	7.2048	0.39914	
0.655552721	7.5865	0.43403	



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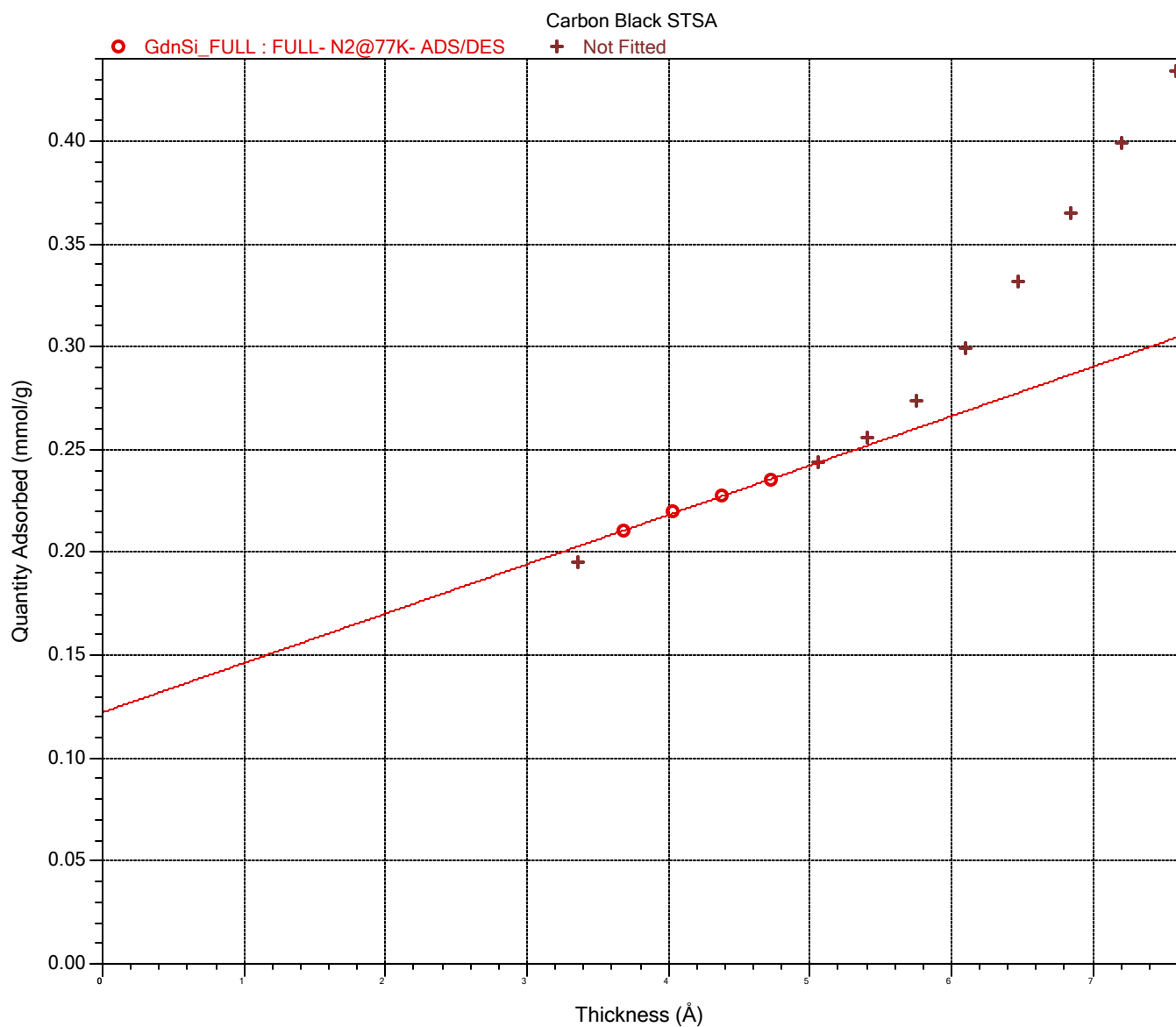
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Automatic degas: No

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Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
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Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

t-Plot



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Automatic degas:	No		

## Horvath-Kawazoe Report

## Cylinder Pore Geometry (Saito-Foley)

Maximum pore volume:	0,007620 cm <sup>3</sup> /g
at Relative Pressure:	0,160006051
Median pore width:	10,718 Å
Relative pressure range:	1e-09 to 0.18

Diameter of adsorptive molecule:	3,000 Å
Adsorptive density:	6.710e+14 molecules/cm <sup>2</sup>
Adsorptive dispersion constant:	7.777e-59
Diameter of sample atom:	3,400 Å
Sample Density:	3.845e+15 molecules/cm <sup>2</sup>
Sample dispersion constant:	6.036e-59

Density conversion factor: 0,0015468

Absolute Pressure (kPa)	Relative Pressure (p/p°)	Quantity Adsorbed (mmol/g)	Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Smoothed Differential Pore Volume (cm <sup>3</sup> /g·Å)
0.00005	0.000000504	0.00699	5.922	0.0002	0.0009
0.00013	0.000001300	0.01420	6.217	0.0005	0.0008
0.00036	0.000003563	0.02138	6.571	0.0007	0.0007
0.00087	0.000008612	0.02849	6.923	0.0010	0.0007
0.00184	0.000018126	0.03550	7.258	0.0012	0.0008
0.00338	0.000033343	0.04236	7.563	0.0015	0.0008
0.00560	0.000055361	0.04902	7.843	0.0017	0.0008
0.00869	0.000085116	0.05544	8.100	0.0019	0.0008
0.01337	0.000131112	0.06186	8.382	0.0021	0.0008
0.01990	0.000195370	0.06846	8.665	0.0024	0.0008
0.02783	0.000273671	0.07466	8.923	0.0026	0.0008
0.03795	0.000373537	0.08047	9.178	0.0028	0.0008
0.05102	0.000502272	0.08608	9.440	0.0030	0.0007
0.06719	0.000661597	0.09140	9.702	0.0032	0.0007
0.08641	0.000851131	0.09638	9.956	0.0033	0.0007
0.10752	0.001059738	0.10082	10.192	0.0035	0.0006
0.14209	0.001400882	0.10645	10.515	0.0037	0.0006
0.18159	0.001790346	0.11159	10.818	0.0039	0.0006
0.22832	0.002251864	0.11652	11.124	0.0040	0.0005
0.28481	0.002810117	0.12135	11.440	0.0042	0.0005
0.34680	0.003422222	0.12575	11.741	0.0044	0.0005
0.41791	0.004125672	0.12999	12.044	0.0045	0.0005
0.50316	0.004968461	0.13428	12.367	0.0047	0.0004
0.59917	0.005917823	0.13837	12.692	0.0048	0.0004

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Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Absolute Pressure (kPa)	Relative Pressure (p/p°)	Quantity Adsorbed (mmol/g)	Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Smoothed Differential Pore Volume (cm <sup>3</sup> /g·Å)
0.70283	0.006941344	0.14215	13.006	0.0049	0.0004
0.80308	0.007932398	0.14537	13.283	0.0050	0.0004
0.91268	0.009017041	0.14848	13.565	0.0051	0.0004
1.04822	0.010356844	0.15189	13.885	0.0053	0.0004
5.97844	0.058807336	0.19530	20.437	0.0068	0.0001
10.99654	0.108174458	0.21023	25.085	0.0073	0.0001
16.26264	0.160006051	0.21978	29.671	0.0076	0.0001

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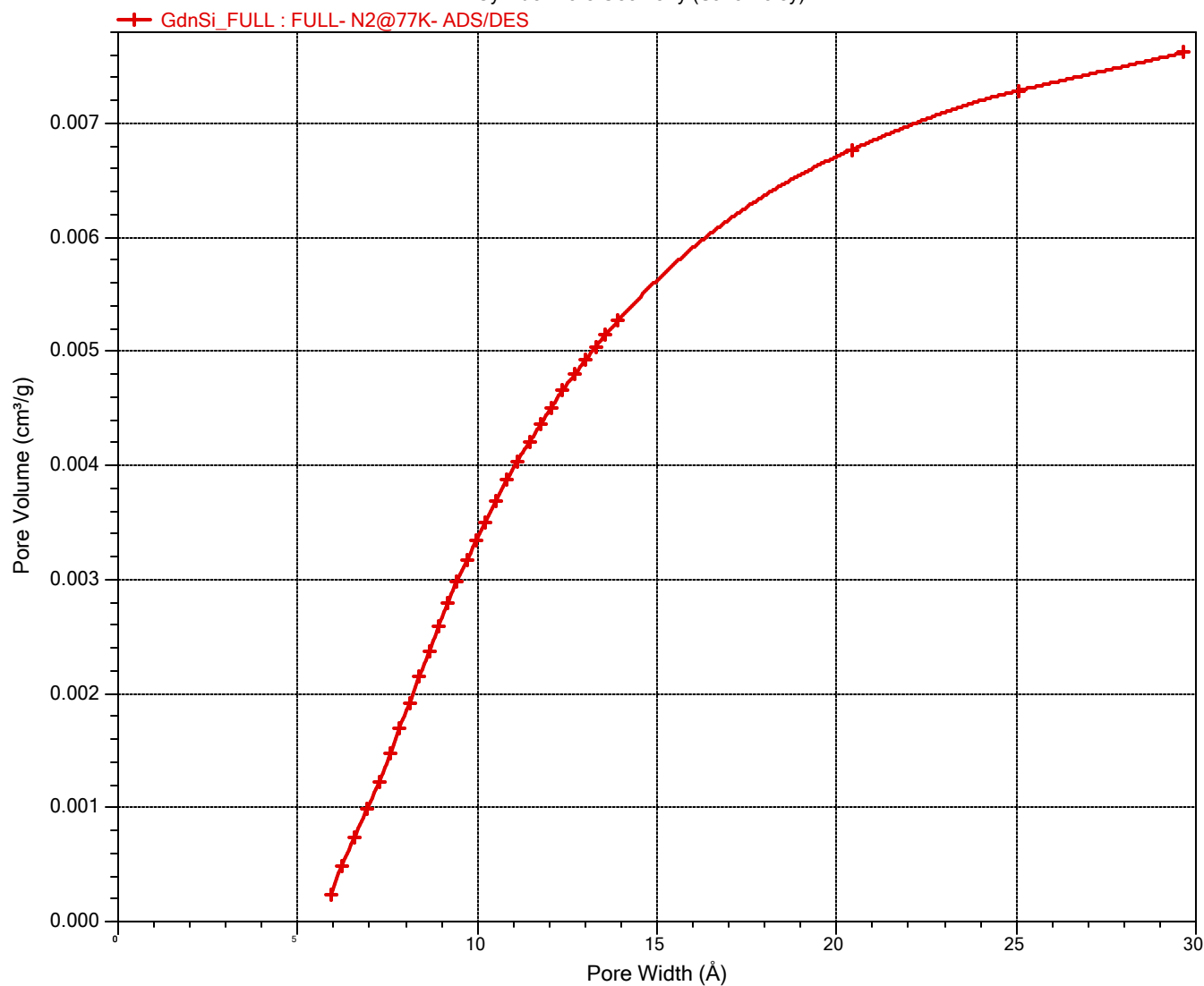
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Sample density: 1,000 g/cm<sup>3</sup>

### Horvath-Kawazoe Cumulative Pore Volume Plot

Cylinder Pore Geometry (Saito-Foley)



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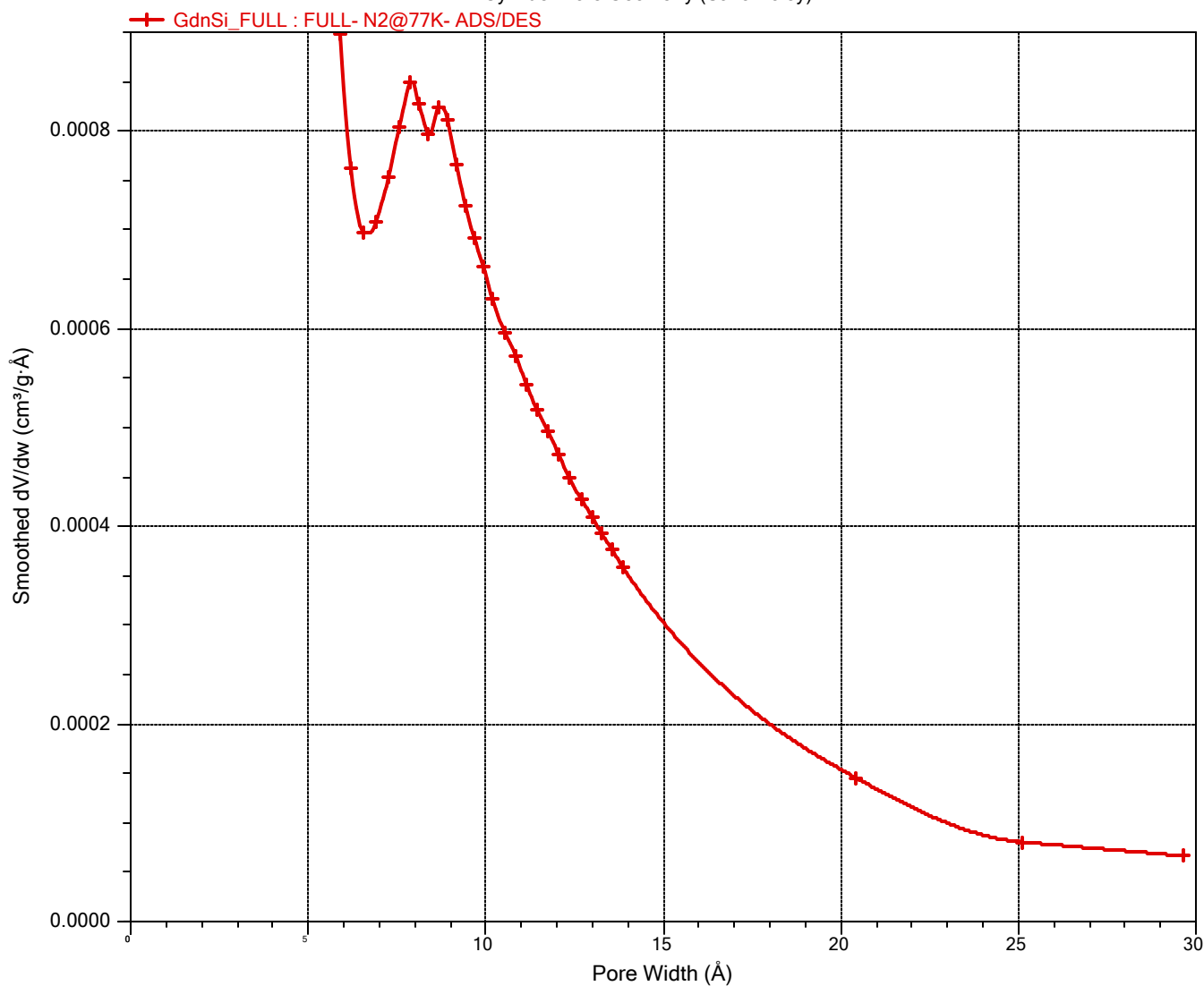
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Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

### Horvath-Kawazoe Differential Pore Volume Plot

Cylinder Pore Geometry (Saito-Foley)



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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Porosity Distribution by  
Model: N2 - Cylindrical Pores - Oxide Surface  
Method: Non-negative Regularization: 0,01000  
Standard Deviation of Fit: 0,002272 mmol/g

Volume in Pores	<	5,58 Å	0,00025 cm <sup>3</sup> /g
Total Volume in Pores	<=	203,97 Å	0,01697 cm <sup>3</sup> /g
Area in Pores	>	203,97 Å	0,000 m <sup>2</sup> /g
Total Area in Pores	>=	5,58 Å	17,699 m <sup>2</sup> /g

Pore Table				
Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)
5.58	0.00025	0.00000	0.000	0.000
5.93	0.00025	0.00000	0.000	0.000
6.29	0.00025	0.00000	0.000	0.000
6.65	0.00025	0.00000	0.000	0.000
7.01	0.00025	0.00000	0.000	0.000
7.36	0.00025	0.00000	0.000	0.000
7.72	0.00025	0.00000	0.000	0.000
8.08	0.00029	0.00004	0.194	0.194
8.44	0.00029	0.00000	0.194	0.000
8.79	0.00029	0.00000	0.194	0.000
9.15	0.00029	0.00000	0.194	0.000
9.51	0.00029	0.00000	0.194	0.000
9.87	0.00029	0.00000	0.194	0.000
10.22	0.00029	0.00000	0.194	0.000
10.58	0.00029	0.00000	0.194	0.000
10.94	0.00029	0.00000	0.194	0.000
11.30	0.00029	0.00000	0.194	0.000
11.65	0.00029	0.00000	0.194	0.000
12.01	0.00041	0.00012	0.605	0.411
12.37	0.00069	0.00027	1.493	0.889
12.73	0.00101	0.00032	2.487	0.993
13.08	0.00116	0.00015	2.947	0.460
13.44	0.00116	0.00000	2.947	0.000
13.80	0.00116	0.00000	2.947	0.000
14.16	0.00116	0.00000	2.947	0.000
14.51	0.00153	0.00038	3.981	1.034
14.87	0.00231	0.00078	6.080	2.099
15.23	0.00309	0.00078	8.137	2.057
15.59	0.00348	0.00039	9.127	0.991
15.94	0.00348	0.00000	9.127	0.000
16.30	0.00348	0.00000	9.127	0.000

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Pore Table		
		Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)
16.66	0.00348	0.00000	9.127	0.000
17.02	0.00348	0.00000	9.127	0.000
17.37	0.00348	0.00000	9.127	0.000
17.73	0.00348	0.00000	9.127	0.000
18.09	0.00348	0.00000	9.127	0.000
18.44	0.00348	0.00000	9.127	0.000
18.80	0.00348	0.00000	9.127	0.000
19.16	0.00348	0.00000	9.127	0.000
19.52	0.00348	0.00000	9.127	0.000
19.87	0.00348	0.00000	9.127	0.000
20.23	0.00348	0.00000	9.127	0.000
20.59	0.00348	0.00000	9.127	0.000
20.95	0.00348	0.00000	9.127	0.000
21.30	0.00348	0.00000	9.127	0.000
21.66	0.00348	0.00000	9.127	0.000
22.38	0.00348	0.00000	9.127	0.000
23.09	0.00348	0.00000	9.127	0.000
23.81	0.00348	0.00000	9.127	0.000
24.52	0.00348	0.00000	9.127	0.000
25.24	0.00348	0.00000	9.127	0.000
25.95	0.00348	0.00000	9.127	0.000
26.67	0.00348	0.00000	9.127	0.000
27.38	0.00348	0.00000	9.127	0.000
28.10	0.00348	0.00000	9.127	0.000
28.81	0.00348	0.00000	9.127	0.000
29.53	0.00348	0.00000	9.127	0.000
30.24	0.00348	0.00000	9.127	0.000
30.96	0.00348	0.00000	9.127	0.000
31.67	0.00348	0.00000	9.127	0.000
32.39	0.00348	0.00000	9.127	0.000
33.10	0.00348	0.00000	9.127	0.000
33.82	0.00348	0.00000	9.127	0.000
34.53	0.00348	0.00000	9.127	0.000
35.25	0.00348	0.00000	9.127	0.000
35.96	0.00348	0.00000	9.127	0.000
36.68	0.00348	0.00000	9.127	0.000
37.39	0.00348	0.00000	9.127	0.000
38.11	0.00348	0.00000	9.127	0.000
38.82	0.00348	0.00000	9.127	0.000
39.54	0.00348	0.00000	9.127	0.000
40.25	0.00348	0.00000	9.127	0.000

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Pore Table		
		Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)
40.96	0.00348	0.00000	9.127	0.000
41.68	0.00348	0.00000	9.127	0.000
42.39	0.00351	0.00003	9.158	0.030
43.11	0.00351	0.00000	9.158	0.000
43.82	0.00390	0.00039	9.515	0.357
44.54	0.00390	0.00000	9.515	0.000
45.25	0.00438	0.00047	9.932	0.418
45.97	0.00438	0.00000	9.932	0.000
46.68	0.00492	0.00055	10.402	0.470
47.40	0.00492	0.00000	10.402	0.000
48.11	0.00492	0.00000	10.402	0.000
48.83	0.00563	0.00070	10.977	0.575
49.54	0.00563	0.00000	10.977	0.000
50.26	0.00635	0.00072	11.551	0.573
52.05	0.00744	0.00109	12.389	0.838
54.91	0.00845	0.00101	13.125	0.737
57.77	0.00913	0.00068	13.597	0.471
60.98	0.01013	0.00101	14.256	0.660
64.20	0.01111	0.00097	14.862	0.606
67.42	0.01206	0.00095	15.426	0.564
70.99	0.01293	0.00087	15.919	0.493
74.57	0.01350	0.00056	16.222	0.303
78.50	0.01427	0.00077	16.615	0.393
82.79	0.01489	0.00063	16.917	0.302
87.08	0.01524	0.00034	17.075	0.158
91.37	0.01553	0.00029	17.204	0.129
96.37	0.01589	0.00036	17.353	0.150
101.38	0.01615	0.00026	17.456	0.102
106.38	0.01626	0.00011	17.497	0.042
112.10	0.01633	0.00007	17.522	0.025
117.82	0.01643	0.00009	17.554	0.032
123.90	0.01651	0.00008	17.582	0.027
130.33	0.01657	0.00006	17.599	0.017
136.76	0.01662	0.00005	17.614	0.015
143.91	0.01667	0.00005	17.628	0.014
151.06	0.01672	0.00005	17.640	0.013
158.93	0.01679	0.00007	17.658	0.017
167.15	0.01685	0.00006	17.673	0.015
175.73	0.01689	0.00004	17.682	0.009
184.66	0.01693	0.00004	17.690	0.008
193.96	0.01696	0.00004	17.698	0.008



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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULLL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Pore Table				
Pore Width (Å)	Cumulative Pore Volume (cm <sup>3</sup> /g)	Incremental Pore Volume (cm <sup>3</sup> /g)	Cumulative Pore Area (m <sup>2</sup> /g)	Incremental Pore Area (m <sup>2</sup> /g)
203.97	0.01697	0.00001	17.699	0.001

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Porosity Distribution by  
Model: N2 - Cylindrical Pores - Oxide Surface  
Method: Non-negative Regularization: 0,01000  
Standard Deviation of Fit: 0,002272 mmol/g

Isotherm Table				
Relative Pressure (p/p°)	Experimental Quantity Adsorbed (mmol/g)	Fitted Quantity Adsorbed (mmol/g)	Absolute Residual (mmol/g)	Relative Residual
0.000000631	0.00849	0.01097	-0.00248	-0.292745
0.000000794	0.01027	0.01142	-0.00115	-0.111561
0.000001000	0.01222	0.01202	0.00021	0.016912
0.000001259	0.01401	0.01293	0.00107	0.076519
0.000001585	0.01545	0.01378	0.00167	0.108309
0.000001995	0.01710	0.01486	0.00224	0.130924
0.000002512	0.01888	0.01632	0.00256	0.135621
0.000003162	0.02062	0.01828	0.00234	0.113672
0.000003981	0.02205	0.02058	0.00147	0.066749
0.000005012	0.02372	0.02297	0.00075	0.031795
0.000006310	0.02574	0.02535	0.00040	0.015353
0.000007943	0.02785	0.02767	0.00018	0.006569
0.000010000	0.02965	0.02998	-0.00033	-0.011194
0.000012589	0.03177	0.03235	-0.00058	-0.018252
0.000015849	0.03417	0.03484	-0.00068	-0.019764
0.000019953	0.03642	0.03743	-0.00101	-0.027861
0.000025119	0.03896	0.04013	-0.00117	-0.029991
0.000031623	0.04175	0.04291	-0.00116	-0.027821
0.000039811	0.04451	0.04581	-0.00130	-0.029253
0.000050119	0.04764	0.04882	-0.00118	-0.024670
0.000063096	0.05089	0.05195	-0.00106	-0.020735
0.000079433	0.05444	0.05519	-0.00075	-0.013833
0.000100000	0.05777	0.05854	-0.00078	-0.013419
0.000125892	0.06126	0.06200	-0.00074	-0.012142
0.000158490	0.06485	0.06558	-0.00073	-0.011274
0.000199526	0.06882	0.06936	-0.00054	-0.007841
0.000251188	0.07307	0.07331	-0.00025	-0.003364
0.000316228	0.07735	0.07737	-0.00002	-0.000196
0.000398107	0.08164	0.08165	-0.00000	-0.000029
0.000501187	0.08604	0.08594	0.00010	0.001218
0.000630958	0.09049	0.09039	0.00011	0.001188
0.000794328	0.09500	0.09518	-0.00018	-0.001883
0.001000000	0.09966	0.09996	-0.00031	-0.003076
0.001258925	0.10428	0.10506	-0.00078	-0.007462
0.001584895	0.10901	0.10997	-0.00096	-0.008832

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Isotherm Table

Relative Pressure (p/p°)	Experimental Quantity Adsorbed (mmol/g)	Fitted Quantity Adsorbed (mmol/g)	Absolute Residual (mmol/g)	Relative Residual
0.001995263	0.11390	0.11509	-0.00119	-0.010442
0.002511882	0.11889	0.11991	-0.00103	-0.008631
0.003162276	0.12398	0.12484	-0.00086	-0.006950
0.003981066	0.12918	0.12967	-0.00049	-0.003786
0.005011868	0.13448	0.13452	-0.00003	-0.000254
0.006309579	0.13988	0.13945	0.00043	0.003048
0.007943276	0.14540	0.14451	0.00089	0.006131
0.010000000	0.15111	0.14973	0.00139	0.009175
0.012355640	0.15565	0.15511	0.00054	0.003452
0.015186320	0.16057	0.16094	-0.00037	-0.002321
0.018485530	0.16571	0.16573	-0.00001	-0.000086
0.022294740	0.17093	0.16994	0.00099	0.005786
0.026653420	0.17604	0.17383	0.00221	0.012555
0.031598160	0.18085	0.17758	0.00328	0.018110
0.037162240	0.18519	0.18118	0.00402	0.021696
0.043374470	0.18896	0.18469	0.00427	0.022572
0.050259210	0.19216	0.18814	0.00402	0.020919
0.057835260	0.19497	0.19146	0.00351	0.017980
0.066115920	0.19782	0.19468	0.00315	0.015906
0.075109080	0.20092	0.19778	0.00314	0.015631
0.084815920	0.20412	0.20077	0.00335	0.016414
0.095232370	0.20720	0.20365	0.00355	0.017136
0.106348200	0.20987	0.20650	0.00337	0.016055
0.118147500	0.21215	0.20940	0.00275	0.012969
0.130609100	0.21458	0.21247	0.00211	0.009841
0.143706600	0.21704	0.21571	0.00133	0.006134
0.157410500	0.21938	0.21902	0.00036	0.001642
0.171685500	0.22156	0.22232	-0.00076	-0.003448
0.186492100	0.22380	0.22561	-0.00181	-0.008084
0.201792100	0.22612	0.22890	-0.00278	-0.012275
0.217539500	0.22853	0.23218	-0.00365	-0.015976
0.233689500	0.23101	0.23546	-0.00445	-0.019260
0.250196100	0.23356	0.23874	-0.00518	-0.022181
0.267011800	0.23621	0.24202	-0.00581	-0.024582
0.284089500	0.23924	0.24529	-0.00605	-0.025286
0.301380300	0.24255	0.24855	-0.00600	-0.024754
0.318838200	0.24608	0.25182	-0.00574	-0.023327
0.336417100	0.25024	0.25508	-0.00484	-0.019355
0.354071100	0.25487	0.25835	-0.00348	-0.013662
0.371757900	0.26001	0.26162	-0.00161	-0.006188

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Isotherm Table

Relative Pressure (p/p°)	Experimental Quantity Adsorbed (mmol/g)	Fitted Quantity Adsorbed (mmol/g)	Absolute Residual (mmol/g)	Relative Residual
0.389435500	0.26620	0.26522	0.00097	0.003654
0.407065800	0.27336	0.27244	0.00092	0.003358
0.424610500	0.28140	0.28055	0.00085	0.003028
0.442034200	0.29053	0.28951	0.00102	0.003518
0.459305300	0.30107	0.30034	0.00073	0.002430
0.476393400	0.31212	0.31141	0.00071	0.002263
0.493271100	0.32314	0.32686	-0.00372	-0.011508
0.509911800	0.33412	0.32945	0.00466	0.013962
0.526293400	0.34491	0.34414	0.00077	0.002239
0.542394700	0.35558	0.35501	0.00057	0.001596
0.558200000	0.36629	0.37036	-0.00407	-0.011109
0.573690800	0.37706	0.37236	0.00470	0.012473
0.588853900	0.38774	0.38732	0.00043	0.001106
0.603677600	0.39817	0.40222	-0.00405	-0.010161
0.618153900	0.40825	0.40376	0.00449	0.011002
0.632272400	0.41802	0.41765	0.00037	0.000882
0.646028900	0.42749	0.42722	0.00028	0.000644
0.659417100	0.43664	0.44004	-0.00341	-0.007805
0.672435500	0.44482	0.44108	0.00374	0.008410
0.685081600	0.45196	0.45172	0.00024	0.000532
0.697355300	0.45825	0.45805	0.00020	0.000429
0.709256600	0.46382	0.46363	0.00019	0.000420
0.720789500	0.46872	0.47037	-0.00165	-0.003527
0.731953900	0.47285	0.47101	0.00184	0.003891
0.742756600	0.47618	0.47603	0.00015	0.000305
0.753200000	0.47866	0.47852	0.00014	0.000294
0.763289500	0.48040	0.48028	0.00012	0.000251
0.773030300	0.48200	0.48248	-0.00048	-0.001005
0.782430300	0.48353	0.48293	0.00060	0.001242
0.791496100	0.48501	0.48491	0.00010	0.000211
0.800232900	0.48644	0.48635	0.00009	0.000181
0.808648700	0.48781	0.48772	0.00009	0.000175
0.816752600	0.48912	0.48905	0.00007	0.000153
0.824552600	0.49039	0.49032	0.00007	0.000145
0.832053900	0.49161	0.49201	-0.00041	-0.000825
0.839267100	0.49278	0.49230	0.00047	0.000961
0.846200000	0.49390	0.49384	0.00006	0.000121
0.852860500	0.49499	0.49493	0.00005	0.000110
0.859257900	0.49602	0.49598	0.00005	0.000100
0.865398700	0.49702	0.49697	0.00005	0.000095

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULLL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

Isotherm Table

Relative Pressure (p/p°)	Experimental Quantity Adsorbed (mmol/g)	Fitted Quantity Adsorbed (mmol/g)	Absolute Residual (mmol/g)	Relative Residual
0.871292100	0.49798	0.49731	0.00067	0.001350

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

Operator:

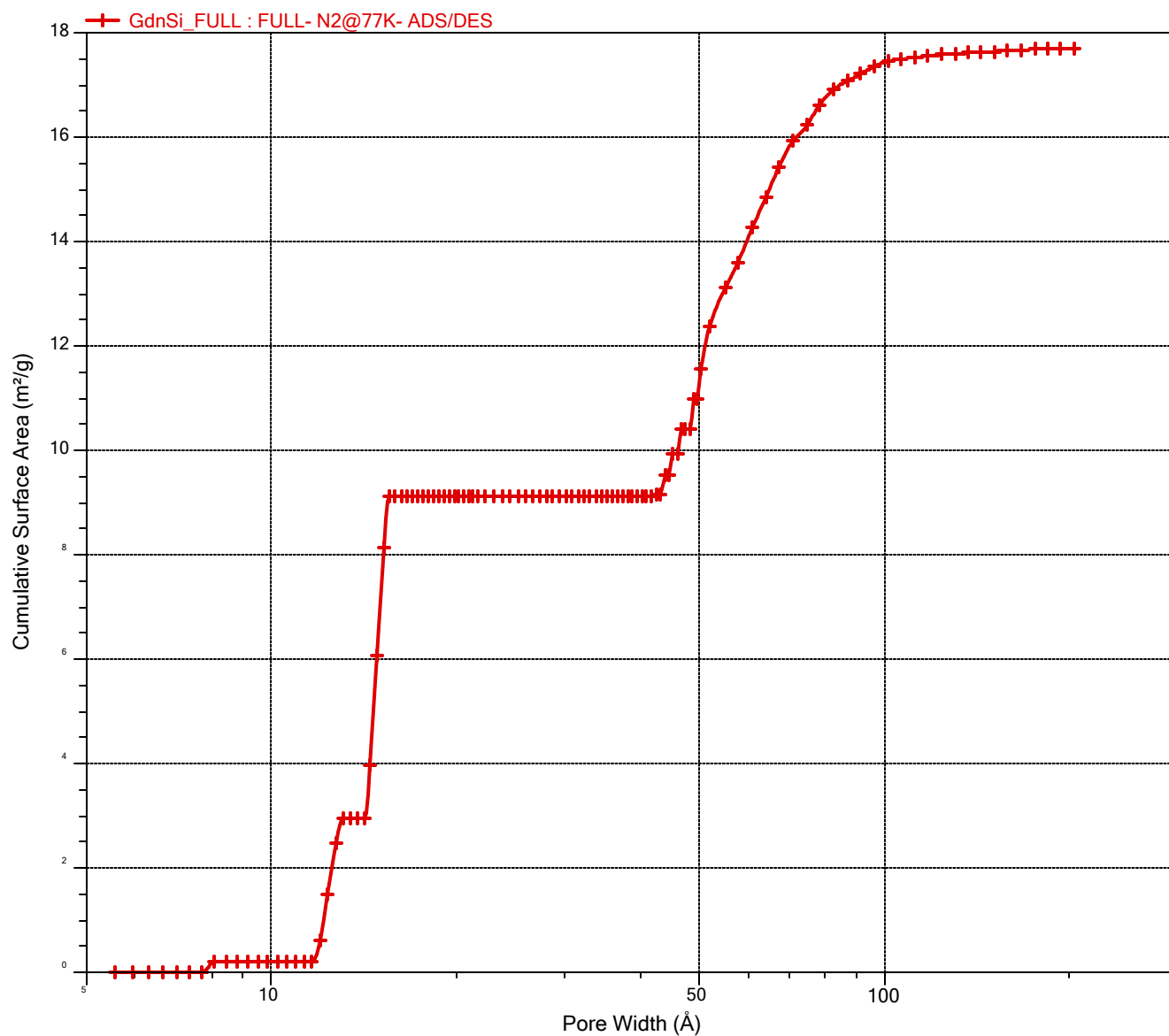
Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

Cumulative Surface Area vs. Pore Width



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

Operator:

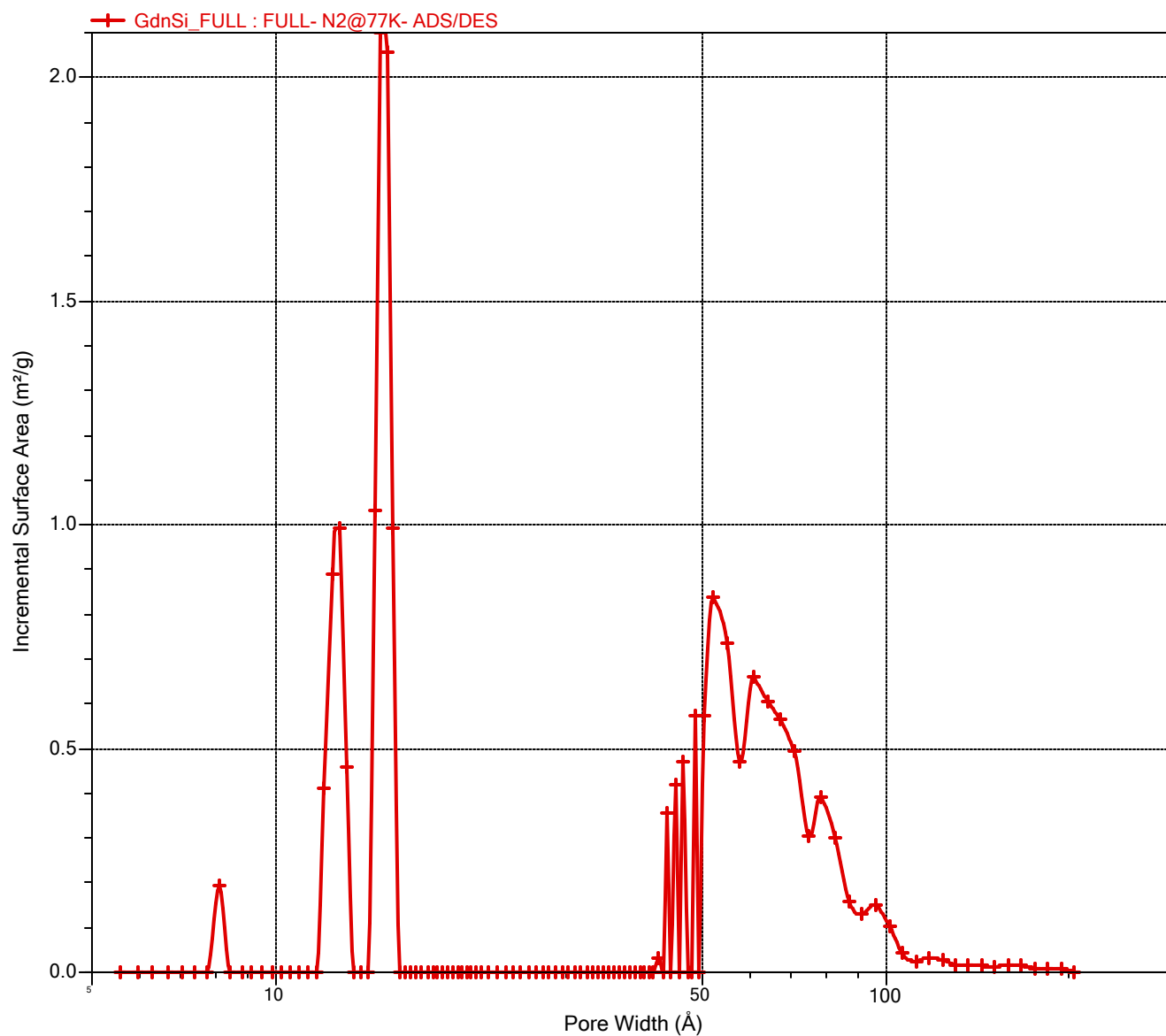
Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

Incremental Surface Area vs. Pore Width



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

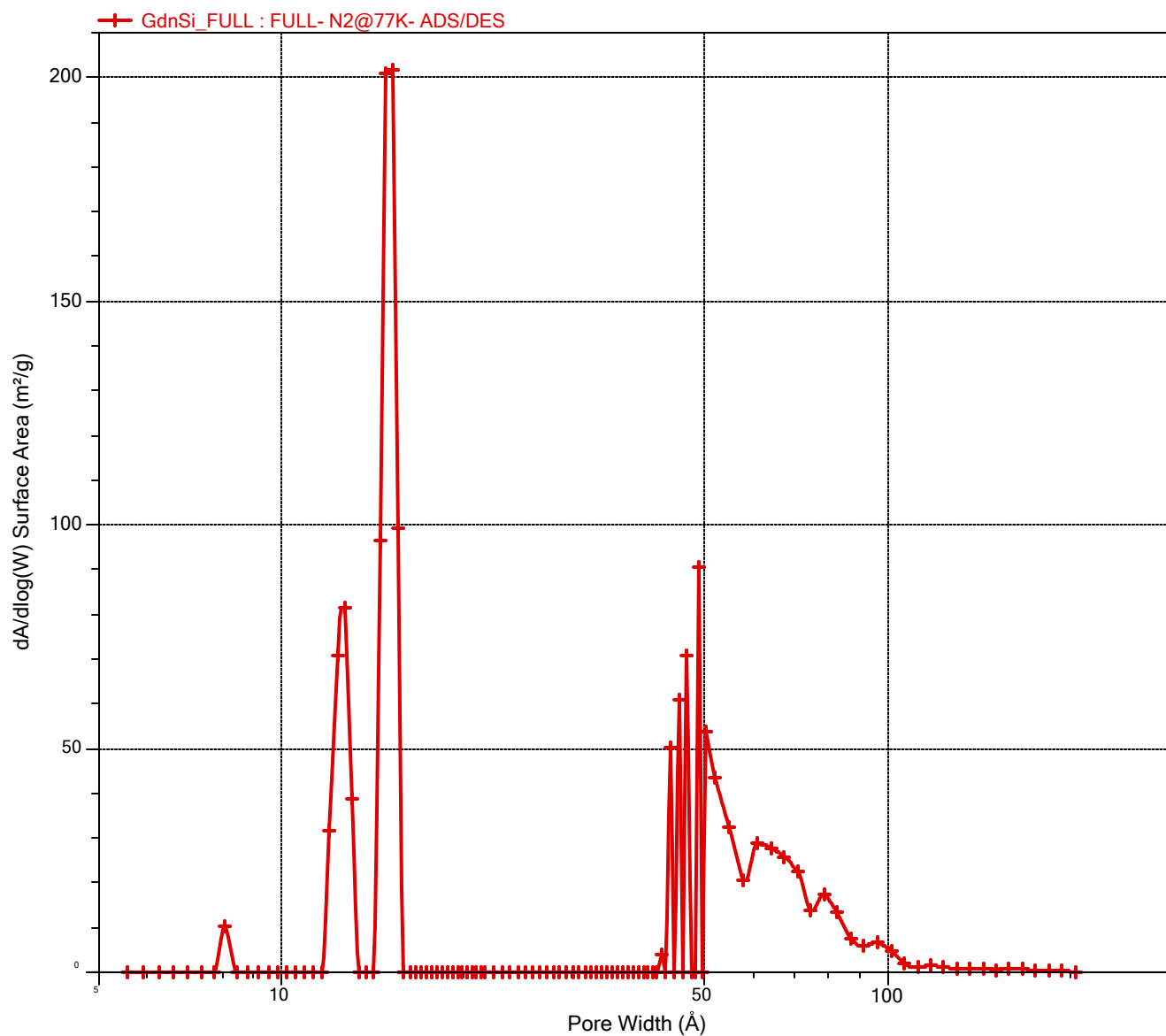
Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

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





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

Operator:

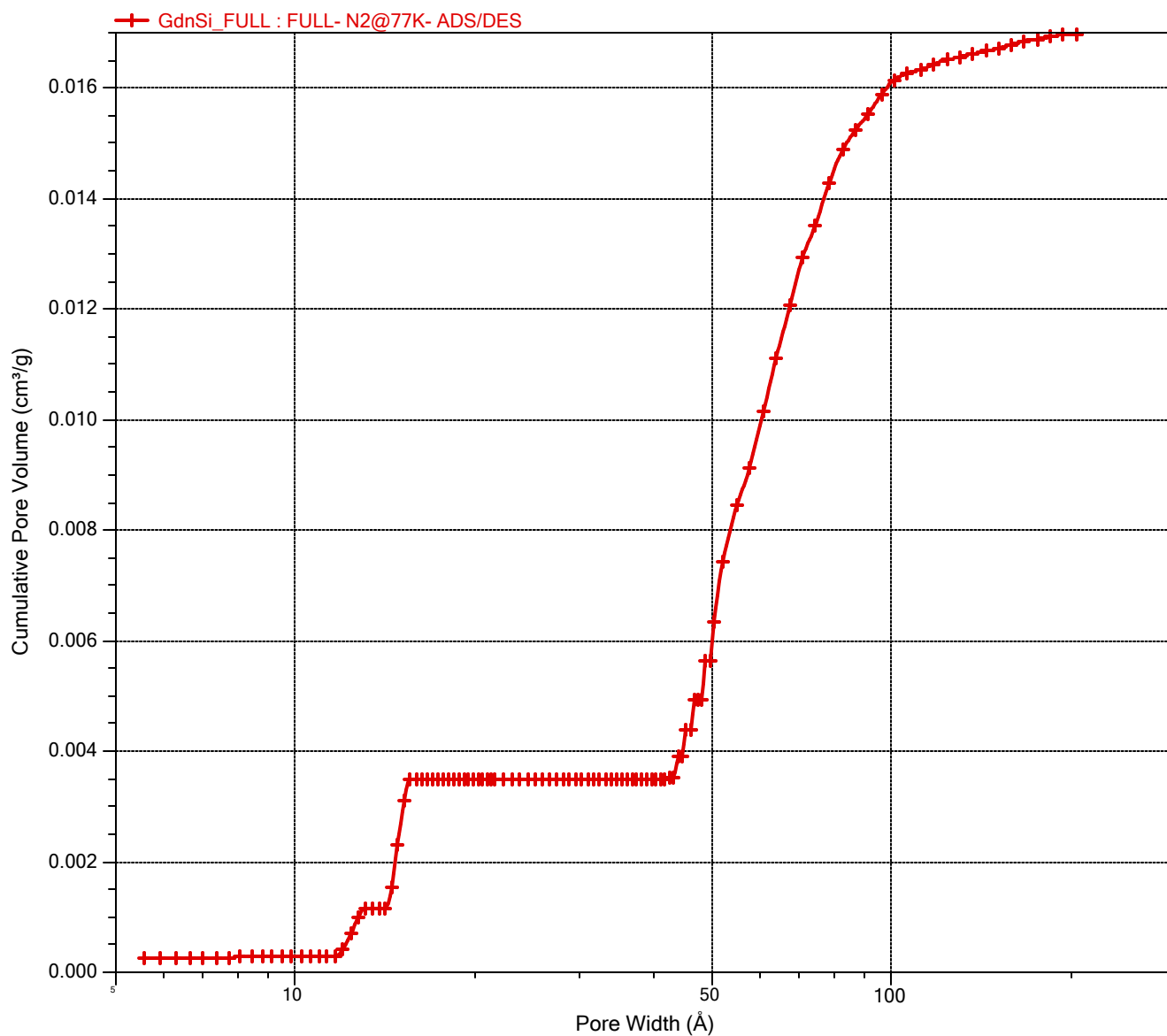
Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

Cumulative Pore Volume vs. Pore Width



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

Operator:

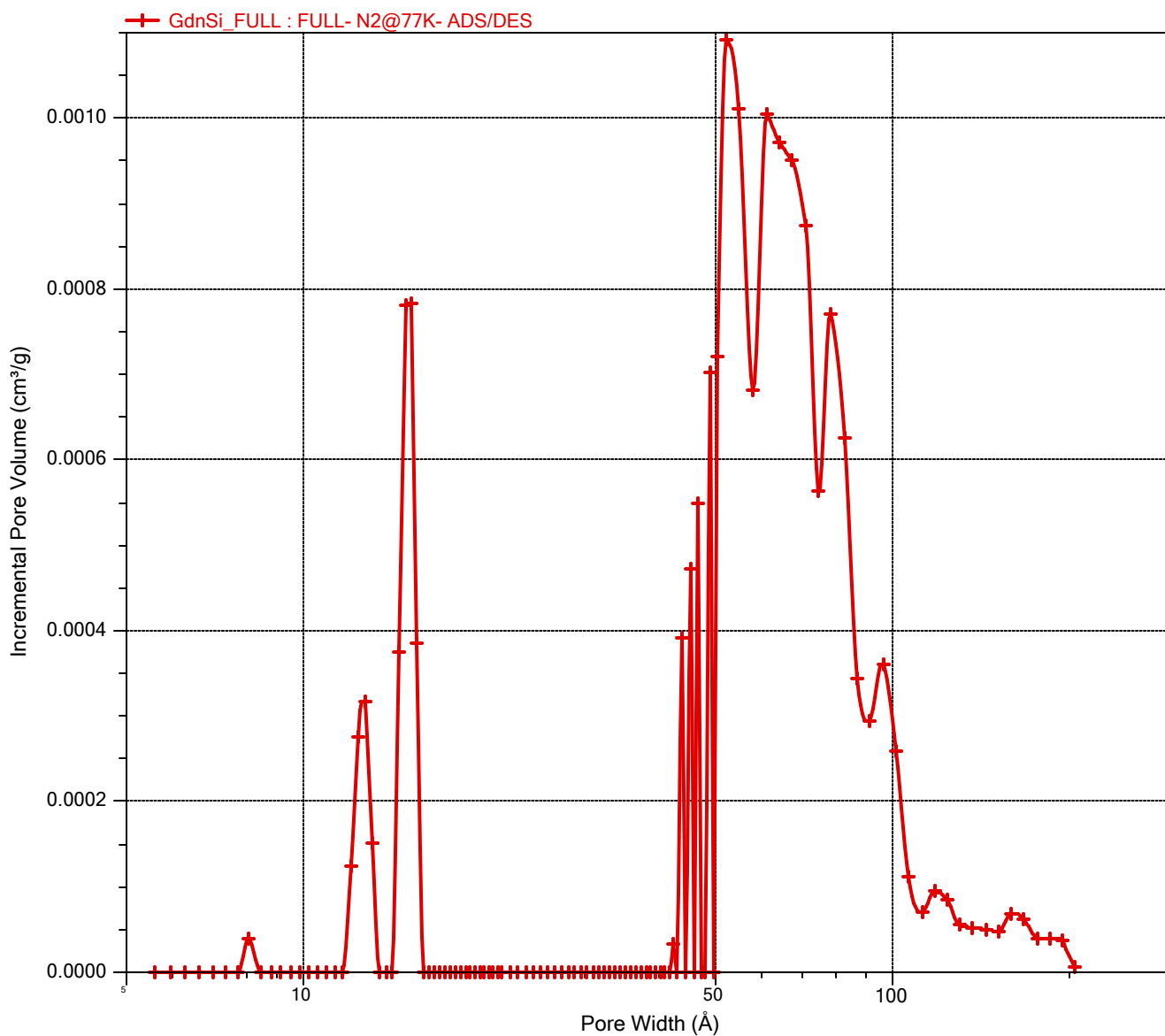
Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

### Incremental Pore Volume vs. Pore Width



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

Operator:

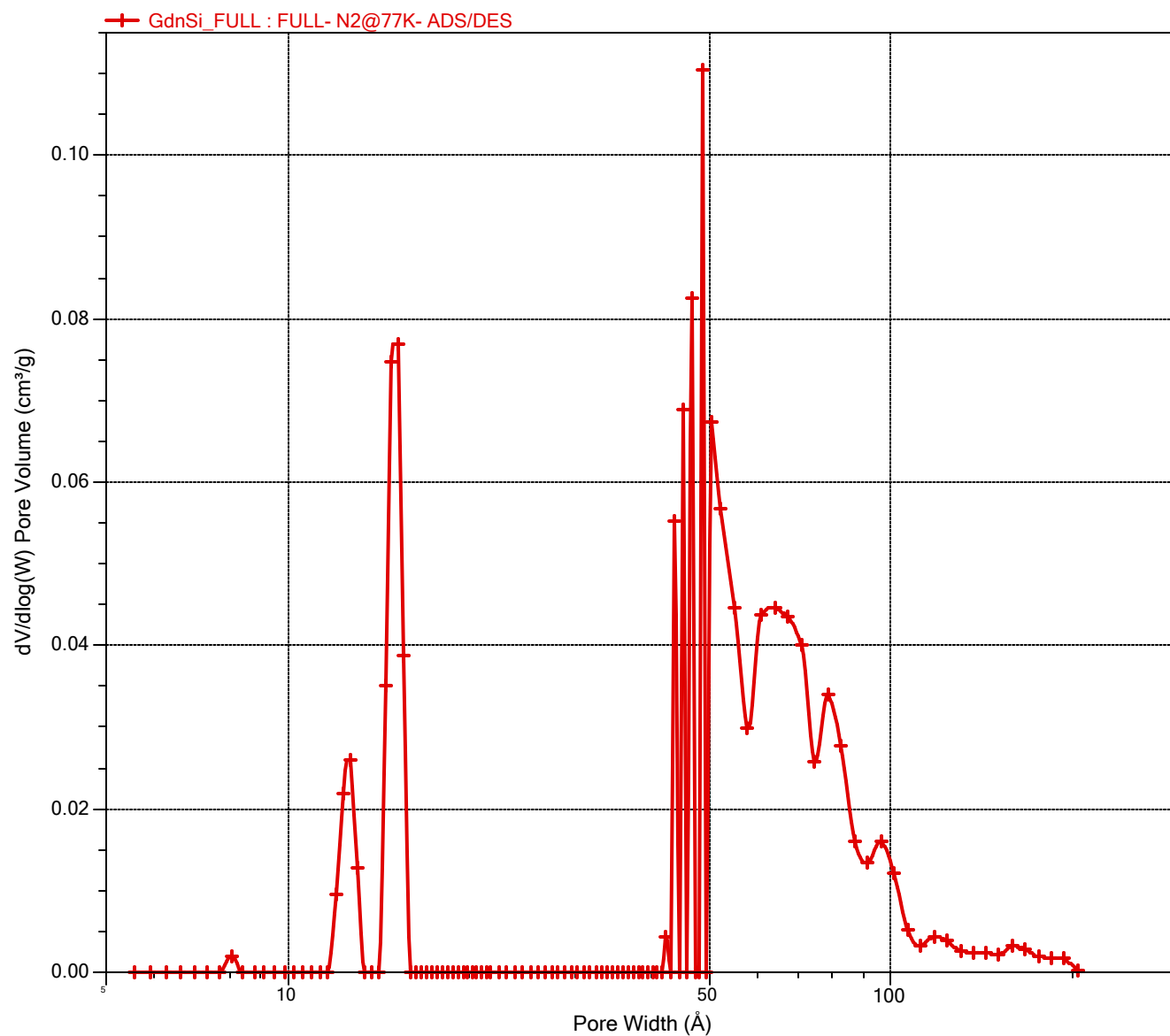
Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

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



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

Operator:

Submitter:

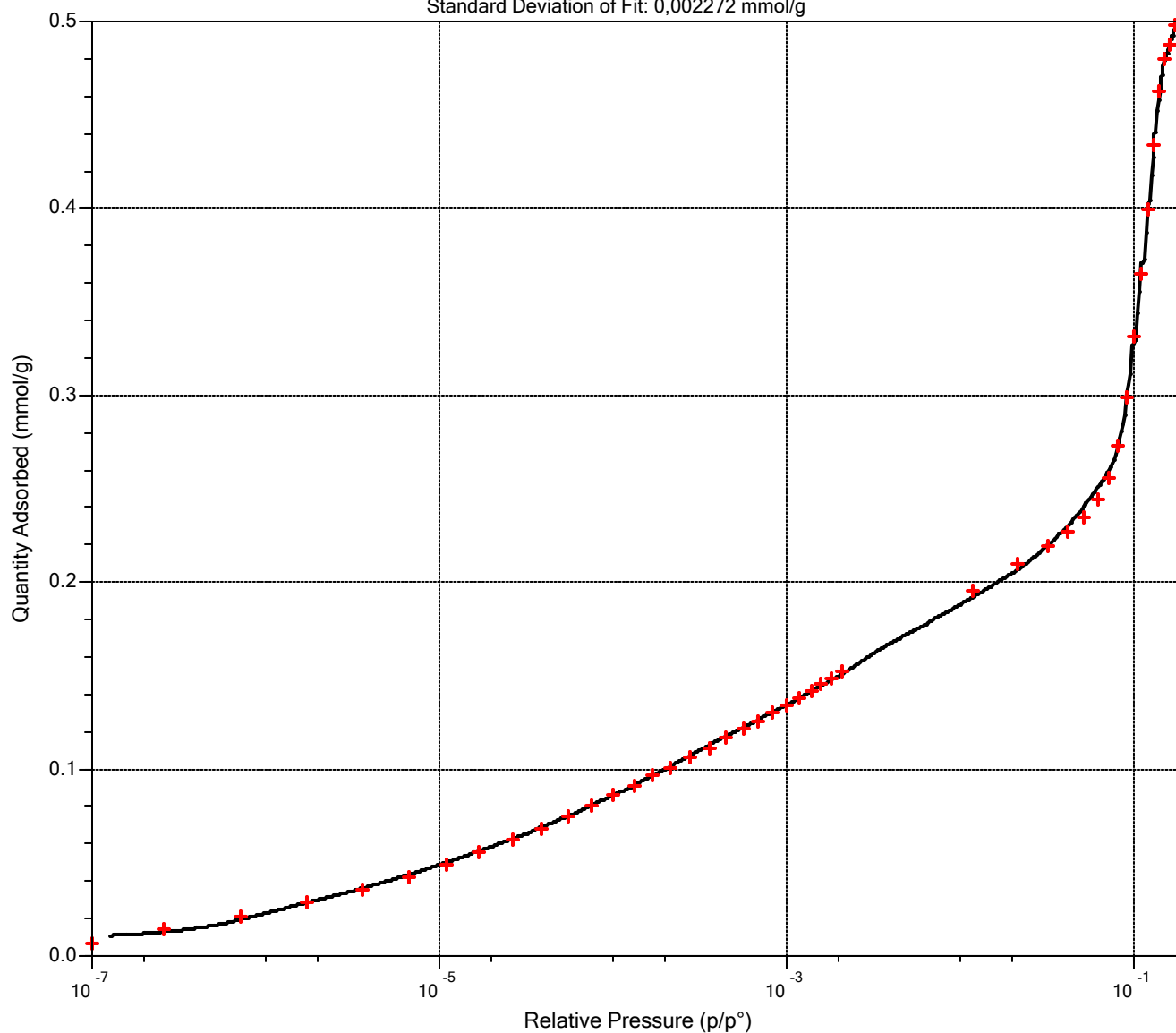
File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

### Goodness of Fit

Standard Deviation of Fit: 0,002272 mmol/g



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

Operator:

Submitter:

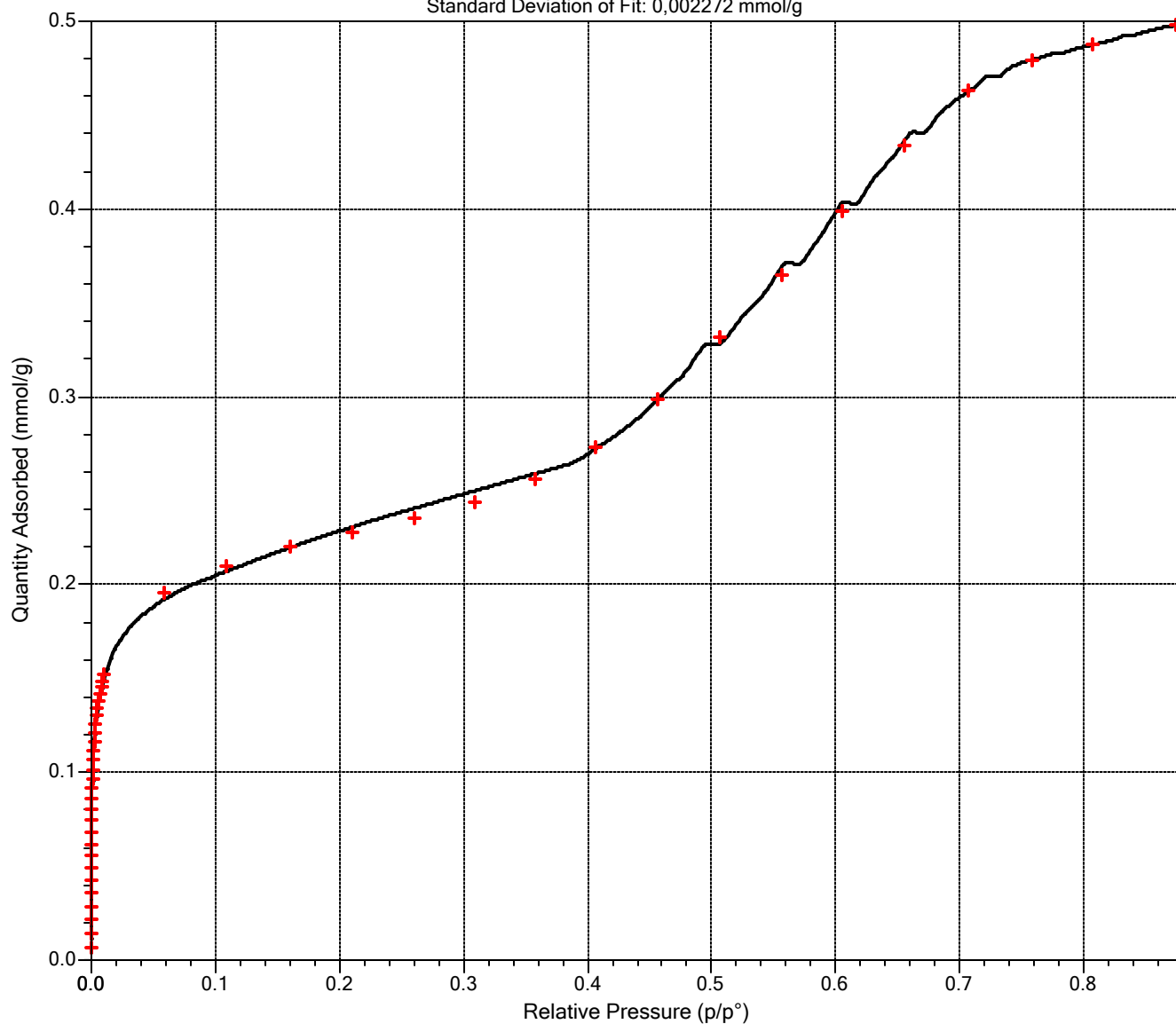
File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started: 18.11.2022 14:39:39  
Completed: 21.11.2022 18:42:54  
Report time: 22.11.2022 14:25:32  
Sample mass: 1,4177 g  
Analysis free space: 83,0000 cm<sup>3</sup>  
Low pressure dose: 0,00720 mmol/g  
Automatic degas: No

Analysis adsorptive: N2  
Analysis bath temp.: 77,300 K  
Thermal correction: Yes  
Ambient free space: 28,0000 cm<sup>3</sup> Entered  
Equilibration interval: 30 s  
Sample density: 1,000 g/cm<sup>3</sup>

### Goodness of Fit

Standard Deviation of Fit: 0,002272 mmol/g



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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## Sample Information

Method: FULL- N2@77K- ADS/DES  
 Sample: FULL- N2@77K- ADS/DES  
 Operator:  
 Submitter:  
 Mass type: Entered  
 Sample mass: 1,4177 g  
 Density: 1,000 g/cm<sup>3</sup>  
 Type of data: Automatically collected  
 Instrument type: 2460  
 Original instrument type: 2460  
 Comments:

## Sample Tube

Sample tube: W1  
 Ambient free space: 1,0000 cm<sup>3</sup>  
 Analysis free space: 1,0000 cm<sup>3</sup>  
 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: FULL- N2@77K- ADS/DES

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
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: 28,0000 cm<sup>3</sup>  
 Analysis free space: 83,0000 cm<sup>3</sup>

## 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: 0,00720 mmol/g  
 Minimum equilibration delay: 0,50 h  
 Maximum equilibration delay: 2,00 h  
 Maximum number of decants: 6

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

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

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

Minimum equilibration delay at p/p° &gt;= 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:	3,8600 Å
Molecular cross-sectional area:	0,162 nm <sup>2</sup>
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: FULL- N2@77K- ADS/DES

Operator:

Submitter:

File: D:\OneDrive - Zachodniopomorski Uniwersytet Technologiczny w  
Szczecinie\Doktorat\B...\GdnSi\_FULL.SMP

Started:	18.11.2022 14:39:39	Analysis adsorptive:	N2
Completed:	21.11.2022 18:42:54	Analysis bath temp.:	77,300 K
Report time:	22.11.2022 14:25:32	Thermal correction:	Yes
Sample mass:	1,4177 g	Ambient free space:	28,0000 cm <sup>3</sup> Entered
Analysis free space:	83,0000 cm <sup>3</sup>	Equilibration interval:	30 s
Low pressure dose:	0,00720 mmol/g	Sample density:	1,000 g/cm <sup>3</sup>
Automatic degas:	No		

## Sample Log

Date	Time	Log Message
18.11.2022	14:39:39	Starting a sample analysis for C:\ASAP 2460\data\2022\Kędzierski\Si...\GdnSi_FULL.SMP on port 6.
18.11.2022	19:45:20	Low pressure data collection started
21.11.2022	11:17:39	Standard data collection started.
21.11.2022	18:19:28	Termination started.
21.11.2022	18:42:54	Finished a sample analysis for C:\ASAP 2460\data\2022\Kędzierski\Si...\GdnSi_FULL.SMP on port 6.