

Quantachrome NovaWin - Data Acquisition and Reduction  
for NOVA instruments  
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version 11.0

Analysis		Report	
Operator:alex	Date:2022/05/12	Operator:alex	
Date:5/12/2022			
Sample ID: K GCF 2	Filename:	C:\QCdata\Physisorb\K GCF 1.qps	
Sample Desc:	Comment:		
Sample weight: 0.05 g	Sample Volume: 0.012821 cc	Sample	
Density:3.9 g/cc			
Outgas Time: 8.0 hrs	OutgasTemp: 300.0 C		
Analysis gas: Nitrogen	Bath Temp: 77.3 K		
Press. Tolerance:0.100/0.100 (ads/des) Equil time: 60/60 sec (ads/des) Equil timeout: 240/240 sec (ads/des)			
Analysis Time: 77.6 min	End of run: 2022/05/12 12:56:14	Instrument:	
Nova Station B			
Cell ID: 2		F/W version:	
0.00			
Adsorbate Nitrogen	Temperature 77.350K		
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid	
Density: 0.808 g/cc			

- 1) ]	Relative Pressure P/Po	Volume @ STP cc/g	1 / [ W((Po/P)
	5.08200e-02	43.6089	
9.8234e-01	1.07783e-01	67.8733	
1.4241e+00	1.80328e-01	97.7470	
1.8008e+00	2.33193e-01	119.6623	
2.0334e+00	3.06948e-01	150.7172	
2.3512e+00			

BET summary

Slope =	5.237
Intercept =	7.977e-01
Correlation coefficient, r =	0.992459
C constant=	7.565
Surface Area =	577.110 m <sup>2</sup> /g

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Sample ID: K GCF 2	Filename:	C:\QCdata\Physisorb\K GCF 1.qps
Sample Desc:	Comment:	
Sample weight: 0.05 g	Sample Volume: 0.012821 cc	Sample
Density:3.9 g/cc		
Outgas Time: 8.0 hrs	OutgasTemp: 300.0 C	
Analysis gas: Nitrogen	Bath Temp: 77.3 K	
Press. Tolerance:0.100/0.100 (ads/des) Equil time: 60/60 sec (ads/des) Equil timeout: 240/240 sec (ads/des)		
Analysis Time: 77.6 min	End of run: 2022/05/12 12:56:14	Instrument:
Nova Station B		
Cell ID: 2		F/W version:
0.00		
Adsorbate Nitrogen	Temperature 77.350K	
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid
Density: 0.808 g/cc		

Surface Area Data

MultiPoint BET	5.771e+02
m <sup>2</sup> /g	
NLDFT cumulative surface area	1.910e+02
m <sup>2</sup> /g	

Pore Volume Data

HK method cumulative pore volume	1.334e-01
cc/g	
SF method cumulative pore volume	1.428e-01
cc/g	
NLDFT method cumulative pore volume	2.135e-01
cc/g	

Pore Size Data

HK method pore Radius (Mode)	1.838e+00
Å	
SF method pore Radius (Mode)	2.261e+00
Å	
NLDFT pore Radius (Mode)	1.324e+01
Å	



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Analysis		Report
Operator:alex	Date:2022/05/11	Operator:alex
Date:5/11/2022		
Sample ID: clay a 2	Filename:	C:\QCdata\Physisorb\clay a 1.qps
Sample Desc:	Comment:	
Sample weight: 0.05 g	Sample Volume: 0.012821 cc	Sample
Density:3.9 g/cc		
Outgas Time: 8.0 hrs	OutgasTemp: 300.0 C	
Analysis gas: Nitrogen	Bath Temp: 77.3 K	
Press. Tolerance:0.100/0.100 (ads/des) Equil time: 60/60 sec (ads/des) Equil timeout: 240/240 sec (ads/des)		
Analysis Time: 73.1 min	End of run: 2022/05/11 15:12:06	Instrument:
Nova Station B		
Cell ID: 2		F/W version:
0.00		
Adsorbate Nitrogen	Temperature 77.350K	
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid
Density: 0.808 g/cc		

- 1) ]	Relative Pressure P/Po	Volume @ STP cc/g	1 / [ W((Po/P)
	4.82940e-02	22.7100	
1.7878e+00	1.10016e-01	44.8377	
2.2059e+00	1.71241e-01	66.3619	
2.4912e+00	2.33496e-01	87.7911	
2.7763e+00	2.95533e-01	108.8948	
3.0824e+00			

BET summary

Slope =	5.112
Intercept =	1.591e+00
Correlation coefficient, r =	0.996849
C constant=	4.214
Surface Area =	519.528 m <sup>2</sup> /g

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Analysis		Report
Operator:alex	Date:2022/05/11	Operator:alex
Date:5/11/2022		
Sample ID: clay a 2	Filename:	C:\QCdata\Physisorb\clay a 1.qps
Sample Desc:	Comment:	
Sample weight: 0.05 g	Sample Volume: 0.012821 cc	Sample
Density:3.9 g/cc		
Outgas Time: 8.0 hrs	OutgasTemp: 300.0 C	
Analysis gas: Nitrogen	Bath Temp: 77.3 K	
Press. Tolerance:0.100/0.100 (ads/des)	Equil time: 60/60 sec (ads/des)	Equil timeout:
240/240 sec (ads/des)		
Analysis Time: 73.1 min	End of run: 2022/05/11 15:12:06	Instrument:
Nova Station B		
Cell ID: 2		F/W version:
0.00		
Adsorbate Nitrogen	Temperature 77.350K	
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid
Density: 0.808 g/cc		

Surface Area Data

MultiPoint BET	5.195e+02
m <sup>2</sup> /g	
NLDFT cumulative surface area	1.294e+02
m <sup>2</sup> /g	

Pore Volume Data

HK method cumulative pore volume	9.240e-02
cc/g	
SF method cumulative pore volume	1.004e-01
cc/g	
NLDFT method cumulative pore volume	1.495e-01
cc/g	

Pore Size Data

HK method pore Radius (Mode)	9.237e+00
Å	
SF method pore Radius (Mode)	1.661e+01
Å	
NLDFT pore Radius (Mode)	1.324e+01
Å	



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Analysis		Report	
Operator: alex	Date: 2022/05/11	Operator: alex	
Date: 5/11/2022			
Sample ID: 45%GCF B	Filename:	C:\QCdata\Physisorb\45%GCF A.qps	
Sample Desc:	Comment:		
Sample weight: 0.1 g	Sample Volume: 0.025641 cc	Sample	
Density: 3.9 g/cc			
Outgas Time: 0.0 hrs	OutgasTemp: 0.0 C		
Analysis gas: Nitrogen	Bath Temp: 77.3 K		
Press. Tolerance: 0.100/0.100 (ads/des) Equil time: 60/60 sec (ads/des) Equil timeout: 240/240 sec (ads/des)			
Analysis Time: 87.2 min	End of run:	2022/05/11 18:06:47 Instrument:	
Nova Station C			
Cell ID: 2		F/W version:	
0.00			
Adsorbate Nitrogen	Temperature 77.350K		
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid	
Density: 0.808 g/cc			

- 1) ]	Relative Pressure P/Po	Volume @ STP cc/g	1 / [ W((Po/P)
	4.53260e-02	13.1670	
2.8851e+00	1.08611e-01	25.1785	
3.8719e+00	1.83944e-01	39.1583	
4.6057e+00	2.35364e-01	48.7720	
5.0497e+00	3.10540e-01	62.6962	
5.7480e+00			

BET summary

Slope =	10.507
Intercept =	2.575e+00
Correlation coefficient, r =	0.992805
C constant =	5.081
Surface Area =	266.203 m <sup>2</sup> /g

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Analysis		Report
Operator:alex	Date:2022/05/11	Operator:alex
Date:5/11/2022		
Sample ID: 45%GCF B	Filename:	C:\QCdata\Physisorb\45%GCF A.qps
Sample Desc:	Comment:	
Sample weight: 0.1 g	Sample Volume: 0.025641 cc	Sample
Density:3.9 g/cc		
Outgas Time: 0.0 hrs	OutgasTemp: 0.0 C	
Analysis gas: Nitrogen	Bath Temp: 77.3 K	
Press. Tolerance:0.100/0.100 (ads/des) Equil time: 60/60 sec (ads/des) Equil timeout: 240/240 sec (ads/des)		
Analysis Time: 87.2 min	End of run: 2022/05/11 18:06:47	Instrument:
Nova Station C		
Cell ID: 2		F/W version:
0.00		
Adsorbate Nitrogen	Temperature 77.350K	
Molec. Wt.: 28.013 g	Cross Section: 16.200 Å <sup>2</sup>	Liquid
Density: 0.808 g/cc		

Surface Area Data

MultiPoint BET	2.662e+02
m <sup>2</sup> /g	
NLDFT cumulative surface area	7.503e+01
m <sup>2</sup> /g	

Pore Volume Data

HK method cumulative pore volume	5.151e-02
cc/g	
SF method cumulative pore volume	5.574e-02
cc/g	
NLDFT method cumulative pore volume	8.903e-02
cc/g	

Pore Size Data

HK method pore Radius (Mode)	1.838e+00
Å	
SF method pore Radius (Mode)	2.261e+00
Å	
NLDFT pore Radius (Mode)	1.324e+01
Å	



