Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time: 04.06.2020 09:39:57
HP Analysis Time: 04.06.2020 11:07:33
Report Time: 29.06.2020 10:35:00
Report Range: 0,0007 to 410,0000 MPa
Adv. Contact Angle: 140,000 °
Rec. Contact Angle: 140,000 °
Penetrometer ID: 0063 - (07) 5 Bulb, 0.38 Stem, Solid
Penetrometer Mass: 56,5766 g

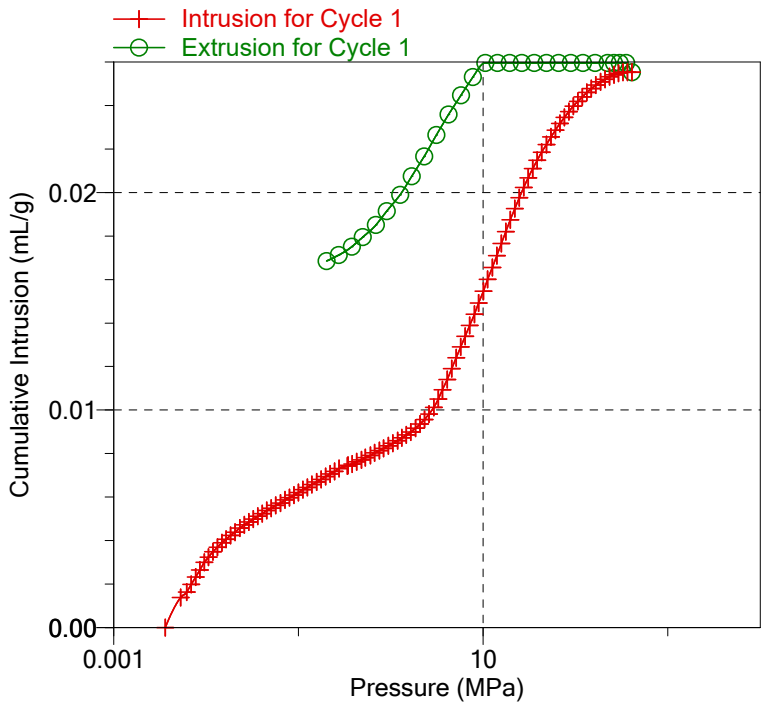
Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Summary Report

Intrusion Data Summary

Total intrusion volume at 407,8634 MPa: 0,0255 mL/g
Total pore area at 407,8634 MPa: 1,523 m²/g
Median pore diameter (volume) at 5,5166 MPa and 0,013 mL/g: 0,26661 µm
Median pore diameter (area) at 82,3824 MPa and 0,762 m²/g: 0,01785 µm
Average pore diameter (4V/A): 0,06704 µm
Bulk density at 0,0036 MPa: 2,4640 g/mL
Apparent (skeletal) density at 407,8634 MPa: 2,6294 g/mL
Porosity: 6,2913 %
Report pressure range: 0,0007 to 410,0000 MPa
Report pore diameter range: 0,00359 to 2.133,22663 µm

Cumulative Intrusion vs Pressure



Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time: 04.06.2020 09:39:57
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Penetrometer Mass: 56,5766 g

Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Tabular Report

Pressure (MPa)	Pore Diameter (µm)	Incremental Pore Volume (mL/g)	Cumulative Pore Volume (mL/g)	Smoothed dV/dD Pore Volume (/µm·mL/g)	Smoothed dV/dlogD Pore Volume (mL/g)
0.0036	406.33775	0.0000	0.0000	8.724×10^{-6}	8.356×10^{-3}
0.0053	277.19600	0.0014	0.0014	9.508×10^{-6}	6.213×10^{-3}
0.0062	238.46375	0.0002	0.0016	9.964×10^{-6}	5.601×10^{-3}
0.0069	212.73445	0.0003	0.0020	1.338×10^{-5}	6.705×10^{-3}
0.0077	191.24059	0.0003	0.0023	1.600×10^{-5}	7.208×10^{-3}
0.0086	171.69768	0.0003	0.0026	1.717×10^{-5}	6.947×10^{-3}
0.0096	153.92674	0.0004	0.0030	1.728×10^{-5}	6.269×10^{-3}
0.0106	138.36221	0.0002	0.0032	1.657×10^{-5}	5.403×10^{-3}
0.0119	123.90351	0.0003	0.0035	1.620×10^{-5}	4.731×10^{-3}
0.0132	111.09375	0.0002	0.0037	1.632×10^{-5}	4.274×10^{-3}
0.0148	99.43051	0.0002	0.0039	1.653×10^{-5}	3.873×10^{-3}
0.0165	89.16044	0.0002	0.0041	1.709×10^{-5}	3.593×10^{-3}
0.0184	79.79009	0.0002	0.0042	1.836×10^{-5}	3.454×10^{-3}
0.0207	71.21613	0.0002	0.0044	2.040×10^{-5}	3.424×10^{-3}
0.0231	63.66422	0.0002	0.0046	2.155×10^{-5}	3.234×10^{-3}
0.0259	56.78055	0.0001	0.0047	2.173×10^{-5}	2.908×10^{-3}
0.0290	50.79222	0.0001	0.0049	2.276×10^{-5}	2.725×10^{-3}
0.0324	45.38167	0.0001	0.0050	2.504×10^{-5}	2.679×10^{-3}
0.0363	40.53378	0.0001	0.0051	2.781×10^{-5}	2.656×10^{-3}
0.0406	36.21251	0.0001	0.0052	3.079×10^{-5}	2.628×10^{-3}
0.0454	32.37862	0.0001	0.0054	3.324×10^{-5}	2.537×10^{-3}
0.0509	28.92317	0.0001	0.0055	3.580×10^{-5}	2.441×10^{-3}
0.0569	25.85118	0.0001	0.0056	4.063×10^{-5}	2.476×10^{-3}
0.0637	23.10336	0.0001	0.0057	4.710×10^{-5}	2.565×10^{-3}
0.0712	20.65517	0.0002	0.0059	5.111×10^{-5}	2.488×10^{-3}
0.0797	18.45327	0.0001	0.0060	5.387×10^{-5}	2.343×10^{-3}
0.0895	16.43280	0.0001	0.0061	6.131×10^{-5}	2.374×10^{-3}
0.1001	14.69147	0.0001	0.0062	7.140×10^{-5}	2.472×10^{-3}

Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time: 04.06.2020 09:39:57
HP Analysis Time: 04.06.2020 11:07:33
Report Time: 29.06.2020 10:35:00
Report Range: 0,0007 to 410,0000 MPa
Adv. Contact Angle: 140,000 °
Rec. Contact Angle: 140,000 °
Penetrometer ID: 0063 - (07) 5 Bulb, 0.38 Stem, Solid
Penetrometer Mass: 56,5766 g

Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Tabular Report

Pressure (MPa)	Pore Diameter (µm)	Incremental Pore Volume (mL/g)	Cumulative Pore Volume (mL/g)	Smoothed dV/dD Pore Volume (/µm·mL/g)	Smoothed dV/dlogD Pore Volume (mL/g)
0.1119	13.13857	0.0001	0.0063	8.021×10^{-5}	2.483×10^{-3}
0.1252	11.74832	0.0001	0.0064	8.999×10^{-5}	2.492×10^{-3}
0.1401	10.50089	0.0001	0.0066	1.004×10^{-4}	2.485×10^{-3}
0.1568	9.38007	0.0001	0.0067	1.117×10^{-4}	2.470×10^{-3}
0.1754	8.38545	0.0001	0.0068	1.261×10^{-4}	2.493×10^{-3}
0.1962	7.49571	0.0001	0.0069	1.425×10^{-4}	2.516×10^{-3}
0.2196	6.69817	0.0001	0.0071	1.608×10^{-4}	2.539×10^{-3}
0.2457	5.98612	0.0001	0.0072	1.756×10^{-4}	2.480×10^{-3}
0.2750	5.34936	0.0001	0.0073	1.562×10^{-4}	1.969×10^{-3}
0.3377	4.35579	0.0001	0.0074	1.459×10^{-4}	1.499×10^{-3}
0.3437	4.27888	0.0000	0.0075	1.522×10^{-4}	1.536×10^{-3}
0.3810	3.86041	0.0001	0.0075	1.932×10^{-4}	1.760×10^{-3}
0.4271	3.44408	0.0001	0.0076	2.255×10^{-4}	1.830×10^{-3}
0.4792	3.06952	0.0001	0.0077	2.769×10^{-4}	2.002×10^{-3}
0.5314	2.76759	0.0001	0.0078	3.274×10^{-4}	2.135×10^{-3}
0.5998	2.45216	0.0001	0.0079	3.818×10^{-4}	2.207×10^{-3}
0.6676	2.20310	0.0001	0.0080	4.254×10^{-4}	2.209×10^{-3}
0.7520	1.95593	0.0001	0.0081	4.870×10^{-4}	2.245×10^{-3}
0.8354	1.76054	0.0001	0.0082	5.554×10^{-4}	2.304×10^{-3}
0.9428	1.56011	0.0001	0.0084	6.344×10^{-4}	2.333×10^{-3}
1.0475	1.40411	0.0001	0.0085	7.084×10^{-4}	2.345×10^{-3}
1.1857	1.24051	0.0001	0.0086	8.572×10^{-4}	2.507×10^{-3}
1.3195	1.11466	0.0001	0.0087	1.033×10^{-3}	2.714×10^{-3}
1.4742	0.99767	0.0001	0.0089	1.238×10^{-3}	2.912×10^{-3}
1.6457	0.89375	0.0001	0.0090	1.490×10^{-3}	3.140×10^{-3}
1.8554	0.79272	0.0002	0.0092	1.932×10^{-3}	3.612×10^{-3}
2.0721	0.70982	0.0002	0.0094	2.492×10^{-3}	4.170×10^{-3}
2.3100	0.63671	0.0002	0.0096	3.148×10^{-3}	4.724×10^{-3}

Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time: 04.06.2020 09:39:57
HP Analysis Time: 04.06.2020 11:07:33
Report Time: 29.06.2020 10:35:00
Report Range: 0,0007 to 410,0000 MPa
Adv. Contact Angle: 140,000 °
Rec. Contact Angle: 140,000 °
Penetrometer ID: 0063 - (07) 5 Bulb, 0.38 Stem, Solid
Penetrometer Mass: 56,5766 g

Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Tabular Report

Pressure (MPa)	Pore Diameter (µm)	Incremental Pore Volume (mL/g)	Cumulative Pore Volume (mL/g)	Smoothed dV/dD Pore Volume (/µm·mL/g)	Smoothed dV/dlogD Pore Volume (mL/g)
2.5976	0.56622	0.0002	0.0098	4.211×10^{-3}	5.620×10^{-3}
2.9173	0.50417	0.0003	0.0101	5.924×10^{-3}	7.035×10^{-3}
3.2615	0.45096	0.0004	0.0105	7.892×10^{-3}	8.391×10^{-3}
3.6329	0.40486	0.0004	0.0109	9.638×10^{-3}	9.199×10^{-3}
4.0811	0.36040	0.0005	0.0114	1.152×10^{-2}	9.781×10^{-3}
4.5682	0.32196	0.0005	0.0119	1.349×10^{-2}	1.024×10^{-2}
5.0877	0.28909	0.0005	0.0124	1.511×10^{-2}	1.029×10^{-2}
5.6933	0.25834	0.0005	0.0129	1.656×10^{-2}	1.008×10^{-2}
6.3918	0.23011	0.0005	0.0134	1.861×10^{-2}	1.009×10^{-2}
7.1420	0.20594	0.0005	0.0139	2.127×10^{-2}	1.032×10^{-2}
8.0179	0.18344	0.0005	0.0144	2.452×10^{-2}	1.060×10^{-2}
8.9486	0.16436	0.0005	0.0149	2.810×10^{-2}	1.088×10^{-2}
10.0191	0.14680	0.0005	0.0155	3.206×10^{-2}	1.109×10^{-2}
11.1934	0.13140	0.0005	0.0160	3.609×10^{-2}	1.118×10^{-2}
12.5362	0.11732	0.0005	0.0166	4.059×10^{-2}	1.122×10^{-2}
14.0249	0.10487	0.0005	0.0171	4.556×10^{-2}	1.126×10^{-2}
15.6861	0.09376	0.0006	0.0177	5.104×10^{-2}	1.128×10^{-2}
17.5522	0.08380	0.0006	0.0182	5.631×10^{-2}	1.112×10^{-2}
19.6390	0.07489	0.0005	0.0187	6.094×10^{-2}	1.076×10^{-2}
21.9857	0.06690	0.0005	0.0193	6.569×10^{-2}	1.036×10^{-2}
24.6056	0.05978	0.0005	0.0198	7.075×10^{-2}	9.970×10^{-3}
27.5251	0.05344	0.0005	0.0202	7.518×10^{-2}	9.469×10^{-3}
30.7879	0.04777	0.0004	0.0207	7.853×10^{-2}	8.843×10^{-3}
34.4341	0.04271	0.0004	0.0211	8.227×10^{-2}	8.284×10^{-3}
38.5218	0.03818	0.0004	0.0215	8.690×10^{-2}	7.821×10^{-3}
43.1212	0.03411	0.0004	0.0219	9.251×10^{-2}	7.438×10^{-3}
48.2628	0.03047	0.0003	0.0222	9.871×10^{-2}	7.091×10^{-3}
53.9963	0.02724	0.0003	0.0226	1.051×10^{-1}	6.746×10^{-3}

Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time: 04.06.2020 09:39:57
HP Analysis Time: 04.06.2020 11:07:33
Report Time: 29.06.2020 10:35:00
Report Range: 0,0007 to 410,0000 MPa
Adv. Contact Angle: 140,000 °
Rec. Contact Angle: 140,000 °
Penetrometer ID: 0063 - (07) 5 Bulb, 0.38 Stem, Solid
Penetrometer Mass: 56,5766 g

Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Tabular Report

Pressure (MPa)	Pore Diameter (µm)	Incremental Pore Volume (mL/g)	Cumulative Pore Volume (mL/g)	Smoothed dV/dD Pore Volume (/µm·mL/g)	Smoothed dV/dlogD Pore Volume (mL/g)
60.4172	0.02434	0.0003	0.0229	1.111×10^{-1}	6.375×10^{-3}
67.5964	0.02176	0.0003	0.0232	1.168×10^{-1}	5.993×10^{-3}
75.6433	0.01944	0.0003	0.0235	1.233×10^{-1}	5.653×10^{-3}
84.6398	0.01738	0.0003	0.0237	1.291×10^{-1}	5.288×10^{-3}
94.6954	0.01553	0.0002	0.0240	1.327×10^{-1}	4.860×10^{-3}
105.9619	0.01388	0.0002	0.0242	1.358×10^{-1}	4.443×10^{-3}
118.5603	0.01241	0.0002	0.0244	1.405×10^{-1}	4.108×10^{-3}
132.6645	0.01109	0.0002	0.0246	1.453×10^{-1}	3.797×10^{-3}
148.4273	0.00991	0.0002	0.0248	1.503×10^{-1}	3.511×10^{-3}
166.0848	0.00886	0.0002	0.0249	1.525×10^{-1}	3.184×10^{-3}
185.8357	0.00791	0.0001	0.0251	1.505×10^{-1}	2.808×10^{-3}
207.9222	0.00707	0.0001	0.0252	1.445×10^{-1}	2.412×10^{-3}
232.6364	0.00632	0.0001	0.0253	1.377×10^{-1}	2.052×10^{-3}
260.3249	0.00565	0.0001	0.0254	1.257×10^{-1}	1.674×10^{-3}
291.2377	0.00505	0.0001	0.0255	9.542×10^{-2}	1.136×10^{-3}
325.8789	0.00451	0.0000	0.0255	5.026×10^{-2}	5.331×10^{-4}
364.6061	0.00403	0.0000	0.0255	1.216×10^{-2}	1.156×10^{-4}
407.8634	0.00361	0.0000	0.0255	3.285×10^{-3}	2.792×10^{-5}
354.3715	0.00415	0.0004	0.0260	-3.023×10^{-1}	-2.854×10^{-3}
300.8182	0.00489	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
261.2666	0.00563	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
221.7467	0.00663	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
163.4968	0.00900	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
120.5636	0.01220	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
88.8830	0.01655	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
65.4980	0.02246	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
48.3193	0.03044	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
35.6364	0.04127	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}

Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

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HP Analysis Time: 04.06.2020 11:07:33
Report Time: 29.06.2020 10:35:00
Report Range: 0,0007 to 410,0000 MPa
Adv. Contact Angle: 140,000 °
Rec. Contact Angle: 140,000 °
Penetrometer ID: 0063 - (07) 5 Bulb, 0.38 Stem, Solid
Penetrometer Mass: 56,5766 g

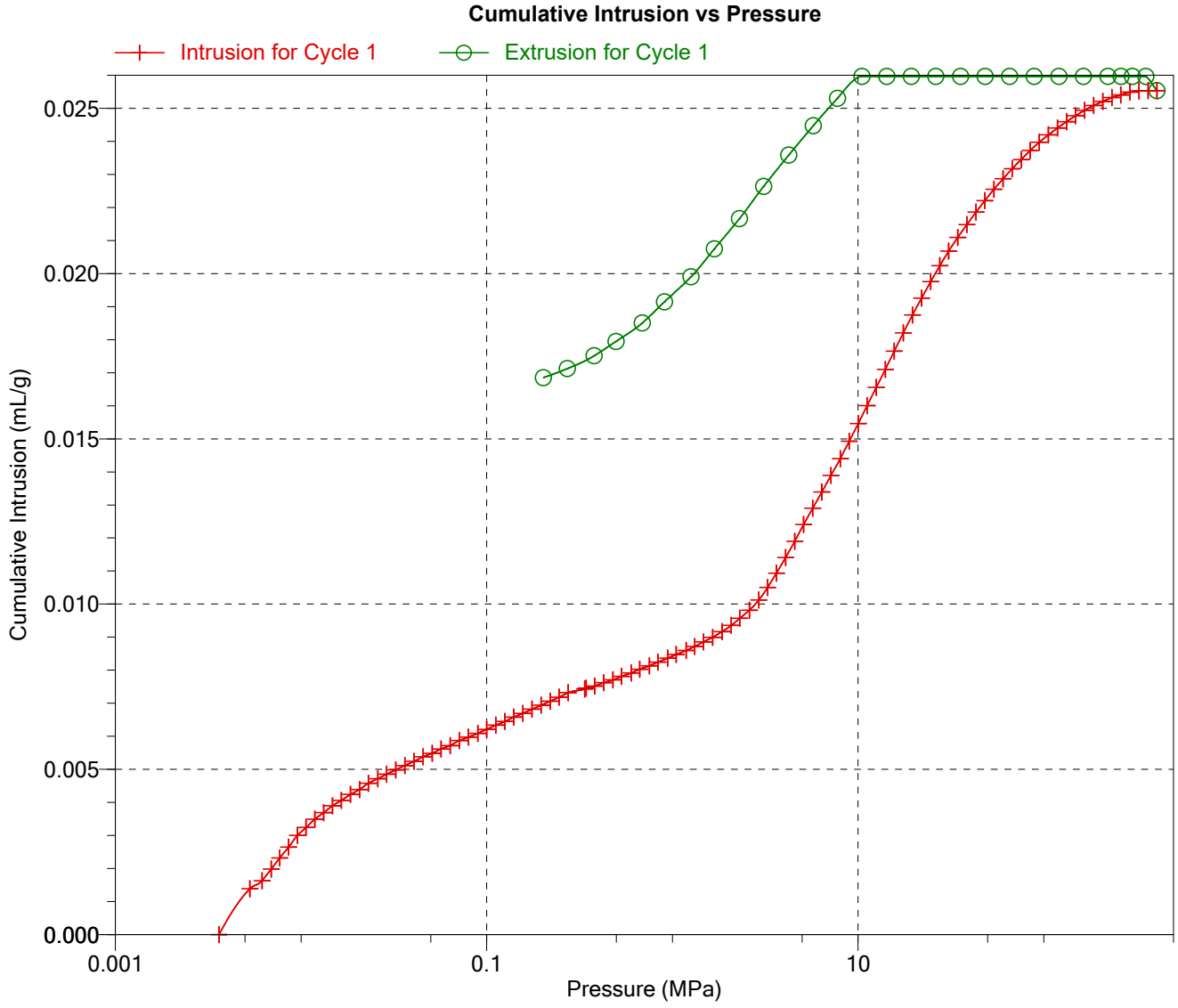
Sample Mass: 2,0669 g
Stem Volume Used: 16 %
Show Neg. Int: No
Correction Type: None
Mercury Temperature: 21,89 °C
Assembly Mass: 126,7530 g
Penetrometer Volume: 5,8685 mL

Tabular Report

Pressure (MPa)	Pore Diameter (µm)	Incremental Pore Volume (mL/g)	Cumulative Pore Volume (mL/g)	Smoothed dV/dD Pore Volume (/µm·mL/g)	Smoothed dV/dlogD Pore Volume (mL/g)
26.2484	0.05603	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
19.3707	0.07593	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
14.2731	0.10305	0.0000	0.0260	0.000×10^{0}	0.000×10^{0}
10.5196	0.13982	0.0000	0.0260	3.871×10^{-3}	1.228×10^{-3}
7.7538	0.18969	-0.0007	0.0253	1.493×10^{-2}	6.424×10^{-3}
5.7346	0.25648	-0.0008	0.0245	1.133×10^{-2}	6.589×10^{-3}
4.2307	0.34765	-0.0009	0.0236	8.697×10^{-3}	6.857×10^{-3}
3.1035	0.47391	-0.0009	0.0226	6.778×10^{-3}	7.284×10^{-3}
2.2968	0.64037	-0.0010	0.0217	4.903×10^{-3}	7.121×10^{-3}
1.6865	0.87209	-0.0009	0.0207	3.454×10^{-3}	6.830×10^{-3}
1.2588	1.16843	-0.0008	0.0199	2.220×10^{-3}	5.882×10^{-3}
0.9061	1.62314	-0.0008	0.0191	1.446×10^{-3}	5.323×10^{-3}
0.6878	2.13852	-0.0006	0.0185	9.914×10^{-4}	4.808×10^{-3}
0.4967	2.96096	-0.0006	0.0179	5.577×10^{-4}	3.744×10^{-3}
0.3791	3.87929	-0.0004	0.0175	3.875×10^{-4}	3.409×10^{-3}
0.2723	5.40240	-0.0004	0.0171	1.765×10^{-4}	2.162×10^{-3}
0.2020	7.28207	-0.0003	0.0169	1.265×10^{-4}	2.089×10^{-3}

Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time:	04.06.2020 09:39:57	Sample Mass:	2,0669 g
HP Analysis Time:	04.06.2020 11:07:33	Stem Volume Used:	16 %
Report Time:	29.06.2020 10:35:00	Show Neg. Int:	No
Report Range:	0,0007 to 410,0000 MPa	Correction Type:	None
Adv. Contact Angle:	140,000 °	Mercury Temperature:	21,89 °C
Rec. Contact Angle:	140,000 °	Assembly Mass:	126,7530 g
Penetrometer ID:	0063 - (07) 5 Bulb, 0.38 Stem, Solid	Penetrometer Volume:	5,8685 mL
Penetrometer Mass:	56,5766 g		



Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
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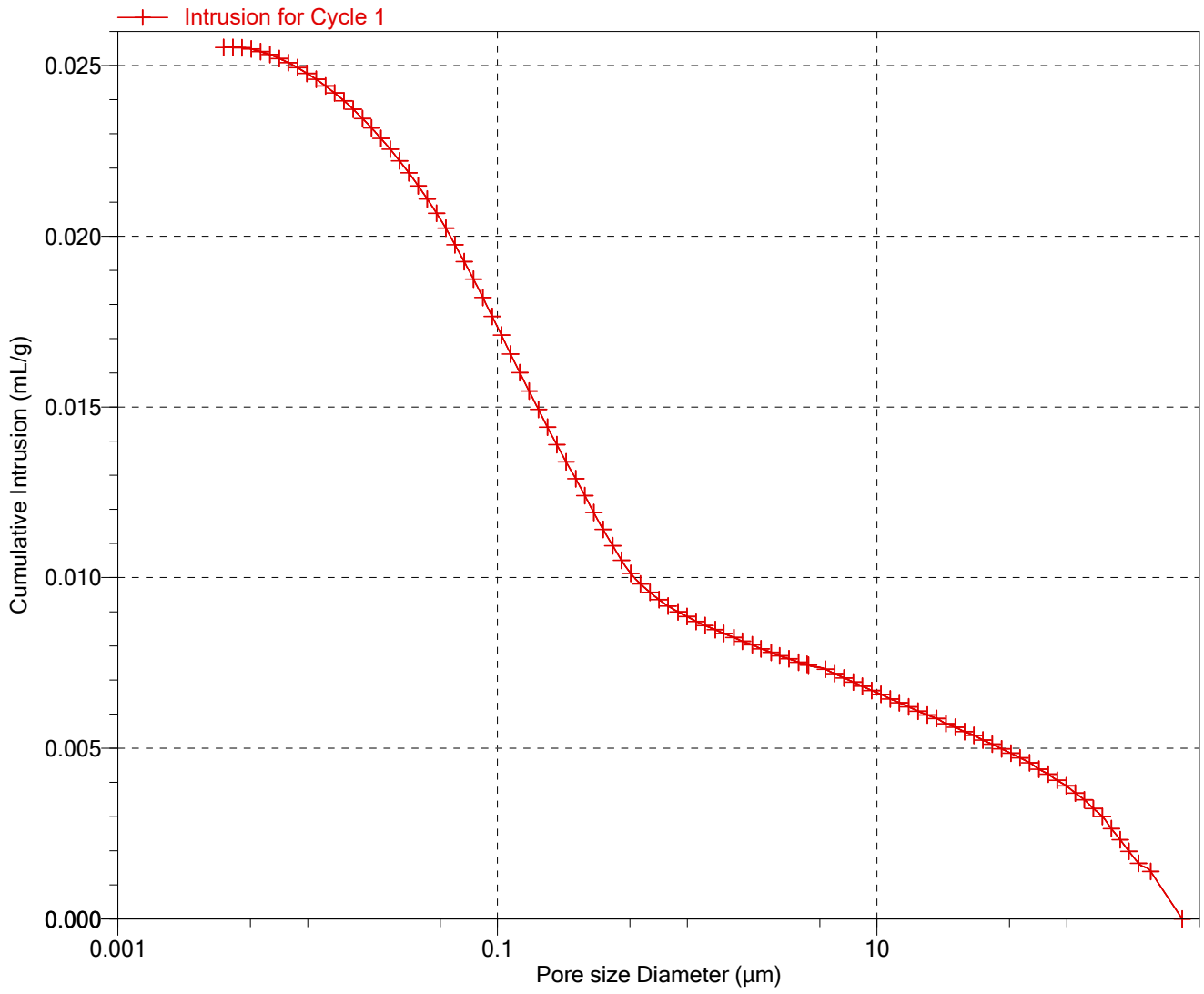
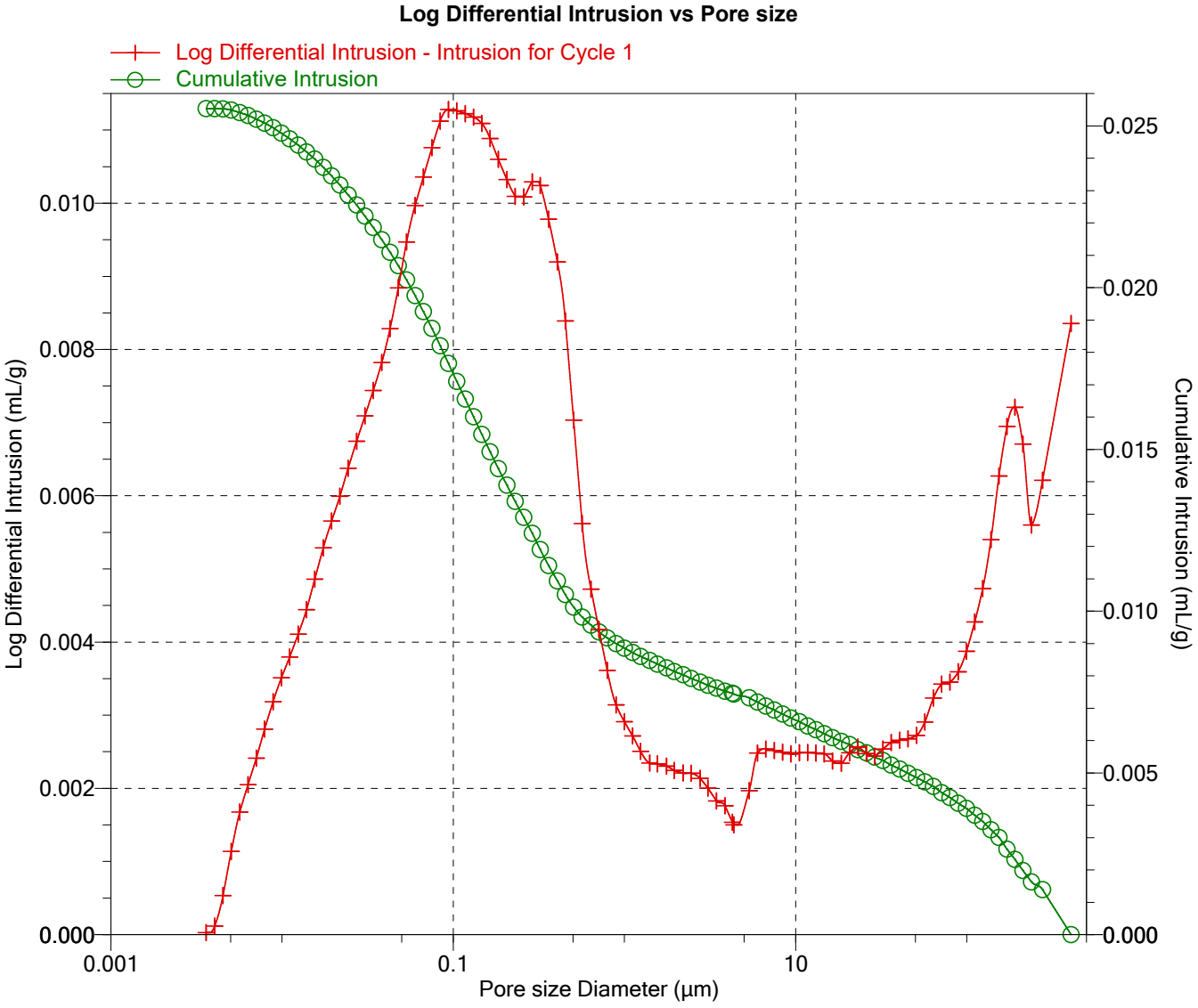
Penetrometer ID:	0063 - (07) 5 Bulb, 0.38 Stem, Solid	Penetrometer Volume:	5,8685 mL
Penetrometer Mass:	56,5766 g		

Cumulative Intrusion vs Pore size



Sample ID: Brenna Sandstein (2020) [6872]
Operator: Zimathies / BAM 6.3
Submitter: Sarah Nagel / BAM 8.2
Pre-treatment: 48h 40°C am ASAP
File: C:\MicroActive AutoPore V 9600\data\Brenna-811.SMP

LP Analysis Time:	04.06.2020 09:39:57	Sample Mass:	2,0669 g
HP Analysis Time:	04.06.2020 11:07:33	Stem Volume Used:	16 %
Report Time:	29.06.2020 10:35:00	Show Neg. Int:	No
Report Range:	0,0007 to 410,0000 MPa	Correction Type:	None
Adv. Contact Angle:	140,000 °	Mercury Temperature:	21,89 °C
Rec. Contact Angle:	140,000 °	Assembly Mass:	126,7530 g
Penetrometer ID:	0063 - (07) 5 Bulb, 0.38 Stem, Solid	Penetrometer Volume:	5,8685 mL
Penetrometer Mass:	56,5766 g