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Operator: seb
Submitter: ruby
File: C:\9500\DATA\000-151.SMP

LP Analysis Time: 09/12/2008 16:38:14
HP Analysis Time: 09/12/2008 19:16:33
Report Time: 12/12/2008 15:49:53

Sample Weight: 1.4500 g
Correction Type: Formula
Show Neg. Int: No

Summary Report

Penetrometer parameters

| | | | |
|----------------|---------------------------------------|---------------------|--------------|
| Penetrometer: | #s/n - (09) 5 Bulb, 1.131 Stem, Solid | | |
| Pen. Constant: | 22.065 $\mu\text{L/pF}$ | Pen. Weight: | 60.9800 g |
| Stem Volume: | 1.1310 mL | Max. Head Pressure: | 0.030682 MPa |
| Pen. Volume: | 6.8500 mL | Assembly Weight: | 143.2100 g |

Hg Parameters

| | | | |
|---------------------|------------------|---------------------|-----------------|
| Adv. Contact Angle: | 130.000 degrees | Rec. Contact Angle: | 130.000 degrees |
| Hg Surface Tension: | 485.000 dynes/cm | Hg Density: | 13.5335 g/mL |

User Parameters

| | | | | | |
|----------|-------|----------|-------|----------|-------|
| Param 1: | 0.000 | Param 2: | 0.000 | Param 3: | 0.000 |
|----------|-------|----------|-------|----------|-------|

Low Pressure:

| | |
|---------------------------|---------------------|
| Evacuation Pressure: | 100 μmHg |
| Evacuation Time: | 5 mins |
| Mercury Filling Pressure: | 0.0042 MPa |
| Equilibration Time: | 20 secs |

High Pressure:

| | |
|---------------------|---------|
| Equilibration Time: | 60 secs |
|---------------------|---------|

Blank Correction by Formula

(From Pressure 0.0007 to 413.6854 MPa)

Intrusion Data Summary

| | |
|---------------------------------|------------------------------|
| Total Intrusion Volume = | 0.1225 mL/g |
| Total Pore Area = | 19.910 m^2/g |
| Median Pore Diameter (Volume) = | 0.0388 μm |
| Median Pore Diameter (Area) = | 0.0115 μm |
| Average Pore Diameter (4V/A) = | 0.0246 μm |
| Apparent (skeletal) Density = | 2.0613 g/mL |
| Porosity = | 20.1646 % |
| Stem Volume Used = | 17 % **** |



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Tabular Report

| Pressure (MPa) | Pore Diameter (μm) | Cumulative Pore Volume (mL/g) | dV/dD Pore Volume (mL/g/ μm) | dV/dlogD Pore Volume (mL/g) |
|-------------------|------------------------------------|-------------------------------------|--|-----------------------------------|
| 0.0042 | 297.2692 | 0.0000 | 0.000×10^0 | 0.000×10^0 |
| 0.0090 | 138.0579 | 0.0021 | 1.322×10^{-5} | 6.317×10^{-3} |
| 0.0110 | 112.9933 | 0.0026 | 1.807×10^{-5} | 5.204×10^{-3} |
| 0.0129 | 96.8927 | 0.0029 | 2.316×10^{-5} | 5.585×10^{-3} |
| 0.0149 | 83.9506 | 0.0032 | 2.470×10^{-5} | 5.133×10^{-3} |
| 0.0171 | 72.8172 | 0.0036 | 2.871×10^{-5} | 5.173×10^{-3} |
| 0.0198 | 62.8843 | 0.0039 | 3.754×10^{-5} | 5.855×10^{-3} |
| 0.0230 | 54.2116 | 0.0043 | 3.685×10^{-5} | 4.959×10^{-3} |
| 0.0267 | 46.7789 | 0.0045 | 3.225×10^{-5} | 3.743×10^{-3} |
| 0.0314 | 39.7735 | 0.0048 | 4.943×10^{-5} | 4.915×10^{-3} |
| 0.0367 | 34.0026 | 0.0051 | 4.615×10^{-5} | 3.912×10^{-3} |
| 0.0426 | 29.2476 | 0.0054 | 5.602×10^{-5} | 4.071×10^{-3} |
| 0.0496 | 25.1451 | 0.0060 | 1.623×10^{-4} | 1.014×10^{-2} |
| 0.0578 | 21.5626 | 0.0064 | 1.115×10^{-4} | 5.985×10^{-3} |
| 0.0675 | 18.4673 | 0.0067 | 8.605×10^{-5} | 3.958×10^{-3} |
| 0.0788 | 15.8156 | 0.0070 | 9.040×10^{-5} | 3.561×10^{-3} |
| 0.0919 | 13.5628 | 0.0075 | 2.246×10^{-4} | 7.583×10^{-3} |
| 0.1074 | 11.6115 | 0.0077 | 1.229×10^{-4} | 3.554×10^{-3} |
| 0.1253 | 9.9520 | 0.0080 | 1.605×10^{-4} | 3.977×10^{-3} |
| 0.1469 | 8.4868 | 0.0083 | 2.363×10^{-4} | 5.006×10^{-3} |
| 0.1715 | 7.2713 | 0.0089 | 4.602×10^{-4} | 8.332×10^{-3} |
| 0.2000 | 6.2363 | 0.0092 | 3.345×10^{-4} | 5.192×10^{-3} |
| 0.2439 | 5.1137 | 0.0097 | 4.211×10^{-4} | 5.485×10^{-3} |
| 0.3191 | 3.9082 | 0.0102 | 4.296×10^{-4} | 4.436×10^{-3} |
| 0.4030 | 3.0940 | 0.0114 | 1.436×10^{-3} | 1.152×10^{-2} |
| 0.5230 | 2.3844 | 0.0122 | 1.196×10^{-3} | 7.500×10^{-3} |
| 0.6701 | 1.8608 | 0.0132 | 1.942×10^{-3} | 9.445×10^{-3} |
| 0.8532 | 1.4615 | 0.0144 | 3.020×10^{-3} | 1.150×10^{-2} |
| 1.0910 | 1.1430 | 0.0160 | 4.843×10^{-3} | 1.445×10^{-2} |
| 1.3990 | 0.8914 | 0.0174 | 5.700×10^{-3} | 1.328×10^{-2} |
| 1.7840 | 0.6990 | 0.0194 | 1.027×10^{-2} | 1.872×10^{-2} |
| 2.2765 | 0.5478 | 0.0211 | 1.157×10^{-2} | 1.653×10^{-2} |
| 2.9088 | 0.4287 | 0.0230 | 1.571×10^{-2} | 1.757×10^{-2} |
| 3.7136 | 0.3358 | 0.0251 | 2.260×10^{-2} | 1.979×10^{-2} |



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Tabular Report

| Pressure (MPa) | Pore Diameter (μm) | Cumulative Pore Volume (mL/g) | dV/dD Pore Volume (mL/g/ μm) | dV/dlogD Pore Volume (mL/g) |
|-------------------|------------------------------------|-------------------------------------|--|-----------------------------------|
| 4.7501 | 0.2625 | 0.0272 | 2.887×10^{-2} | 1.979×10^{-2} |
| 6.0579 | 0.2058 | 0.0299 | 4.687×10^{-2} | 2.515×10^{-2} |
| 7.7386 | 0.1611 | 0.0333 | 7.591×10^{-2} | 3.191×10^{-2} |
| 9.8731 | 0.1263 | 0.0364 | 8.896×10^{-2} | 2.930×10^{-2} |
| 12.6031 | 0.0989 | 0.0400 | 1.313×10^{-1} | 3.389×10^{-2} |
| 16.0892 | 0.0775 | 0.0448 | 2.261×10^{-1} | 4.570×10^{-2} |
| 20.5279 | 0.0607 | 0.0500 | 3.059×10^{-1} | 4.846×10^{-2} |
| 26.1838 | 0.0476 | 0.0558 | 4.489×10^{-1} | 5.573×10^{-2} |
| 33.4275 | 0.0373 | 0.0624 | 6.363×10^{-1} | 6.191×10^{-2} |
| 42.6651 | 0.0292 | 0.0703 | 9.786×10^{-1} | 7.459×10^{-2} |
| 54.4505 | 0.0229 | 0.0786 | 1.306×10^0 | 7.797×10^{-2} |
| 69.4895 | 0.0179 | 0.0878 | 1.853×10^0 | 8.672×10^{-2} |
| 88.6878 | 0.0141 | 0.0957 | 2.042×10^0 | 7.489×10^{-2} |
| 113.1797 | 0.0110 | 0.1034 | 2.522×10^0 | 7.245×10^{-2} |
| 144.4225 | 0.0086 | 0.1119 | 3.590×10^0 | 8.082×10^{-2} |
| 184.3267 | 0.0068 | 0.1188 | 3.705×10^0 | 6.537×10^{-2} |
| 219.9804 | 0.0057 | 0.1225 | 3.362×10^0 | 4.800×10^{-2} |
| 187.0250 | 0.0067 | 0.1215 | 9.844×10^{-1} | 1.395×10^{-2} |
| 147.7380 | 0.0084 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 116.6495 | 0.0107 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 92.0922 | 0.0135 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 72.7112 | 0.0172 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 57.4105 | 0.0217 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 45.3344 | 0.0275 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 35.7612 | 0.0349 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 28.2457 | 0.0441 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 22.3036 | 0.0559 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 17.6362 | 0.0707 | 0.1215 | 0.000×10^0 | 0.000×10^0 |
| 13.9349 | 0.0895 | 0.1203 | 6.898×10^{-2} | 1.266×10^{-2} |
| 10.9286 | 0.1141 | 0.1192 | 4.243×10^{-2} | 9.898×10^{-3} |
| 8.6064 | 0.1449 | 0.1177 | 4.909×10^{-2} | 1.457×10^{-2} |
| 6.8548 | 0.1819 | 0.1161 | 4.222×10^{-2} | 1.582×10^{-2} |
| 5.4154 | 0.2303 | 0.1156 | 1.115×10^{-2} | 5.269×10^{-3} |
| 4.2745 | 0.2917 | 0.1147 | 1.529×10^{-2} | 9.147×10^{-3} |



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| Pressure (MPa) | Pore Diameter (μm) | Cumulative Pore Volume (mL/g) | dV/dD Pore Volume (mL/g/ μm) | dV/dlogD Pore Volume (mL/g) |
|-------------------|------------------------------------|-------------------------------------|--|-----------------------------------|
| 3.3752 | 0.3695 | 0.1135 | 1.542×10^{-2} | 1.169×10^{-2} |
| 2.6626 | 0.4683 | 0.1121 | 1.412×10^{-2} | 1.356×10^{-2} |
| 2.1112 | 0.5907 | 0.1108 | 1.068×10^{-2} | 1.296×10^{-2} |
| 1.6686 | 0.7473 | 0.1096 | 7.339×10^{-3} | 1.125×10^{-2} |
| 1.3154 | 0.9480 | 0.1087 | 4.708×10^{-3} | 9.147×10^{-3} |
| 1.0389 | 1.2003 | 0.1077 | 3.894×10^{-3} | 9.586×10^{-3} |
| 0.8257 | 1.5102 | 0.1069 | 2.616×10^{-3} | 8.127×10^{-3} |
| 0.6524 | 1.9115 | 0.1061 | 1.792×10^{-3} | 7.026×10^{-3} |
| 0.5142 | 2.4253 | 0.1054 | 1.513×10^{-3} | 7.519×10^{-3} |
| 0.4105 | 3.0377 | 0.1045 | 1.425×10^{-3} | 8.924×10^{-3} |
| 0.3256 | 3.8300 | 0.1032 | 1.594×10^{-3} | 1.255×10^{-2} |
| 0.2629 | 4.7431 | 0.1023 | 1.018×10^{-3} | 1.001×10^{-2} |
| 0.3090 | 4.0361 | 0.1023 | 0.000×10^0 | 0.000×10^0 |
| 0.3886 | 3.2086 | 0.1032 | 1.054×10^{-3} | 8.750×10^{-3} |
| 0.5010 | 2.4888 | 0.1033 | 0.000×10^0 | 0.000×10^0 |
| 0.6349 | 1.9641 | 0.1033 | 0.000×10^0 | 0.000×10^0 |
| 0.8005 | 1.5578 | 0.1033 | 0.000×10^0 | 0.000×10^0 |
| 1.0293 | 1.2115 | 0.1039 | 1.733×10^{-3} | 5.496×10^{-3} |
| 1.2956 | 0.9625 | 0.1044 | 2.112×10^{-3} | 5.263×10^{-3} |
| 1.6430 | 0.7590 | 0.1044 | 0.000×10^0 | 0.000×10^0 |
| 2.0844 | 0.5982 | 0.1053 | 5.506×10^{-3} | 8.564×10^{-3} |
| 2.6437 | 0.4717 | 0.1061 | 5.938×10^{-3} | 7.280×10^{-3} |
| 3.3527 | 0.3719 | 0.1068 | 6.864×10^{-3} | 6.636×10^{-3} |
| 4.2552 | 0.2931 | 0.1073 | 7.493×10^{-3} | 5.710×10^{-3} |
| 5.3862 | 0.2315 | 0.1082 | 1.457×10^{-2} | 8.762×10^{-3} |
| 6.8273 | 0.1826 | 0.1093 | 2.067×10^{-2} | 9.811×10^{-3} |
| 8.6511 | 0.1441 | 0.1106 | 3.518×10^{-2} | 1.318×10^{-2} |
| 10.9602 | 0.1138 | 0.1119 | 4.213×10^{-2} | 1.245×10^{-2} |
| 13.8851 | 0.0898 | 0.1133 | 5.762×10^{-2} | 1.344×10^{-2} |
| 17.5876 | 0.0709 | 0.1147 | 7.703×10^{-2} | 1.419×10^{-2} |
| 22.2786 | 0.0560 | 0.1162 | 9.633×10^{-2} | 1.401×10^{-2} |
| 28.2171 | 0.0442 | 0.1175 | 1.157×10^{-1} | 1.328×10^{-2} |
| 35.7482 | 0.0349 | 0.1198 | 2.486×10^{-1} | 2.253×10^{-2} |
| 45.2905 | 0.0275 | 0.1216 | 2.352×10^{-1} | 1.683×10^{-2} |



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|-------------------|------------------------------------|-------------------------------------|--|-----------------------------------|
| 57.3707 | 0.0217 | 0.1232 | 2.827×10^{-1} | 1.596×10^{-2} |
| 72.6753 | 0.0172 | 0.1232 | 0.000×10^0 | 0.000×10^0 |
| 92.0573 | 0.0135 | 0.1232 | 0.000×10^0 | 0.000×10^0 |
| 116.6092 | 0.0107 | 0.1232 | 0.000×10^0 | 0.000×10^0 |
| 147.7107 | 0.0084 | 0.1232 | 0.000×10^0 | 0.000×10^0 |
| 187.1208 | 0.0067 | 0.1232 | 0.000×10^0 | 0.000×10^0 |
| 219.9810 | 0.0057 | 0.1232 | 0.000×10^0 | 0.000×10^0 |



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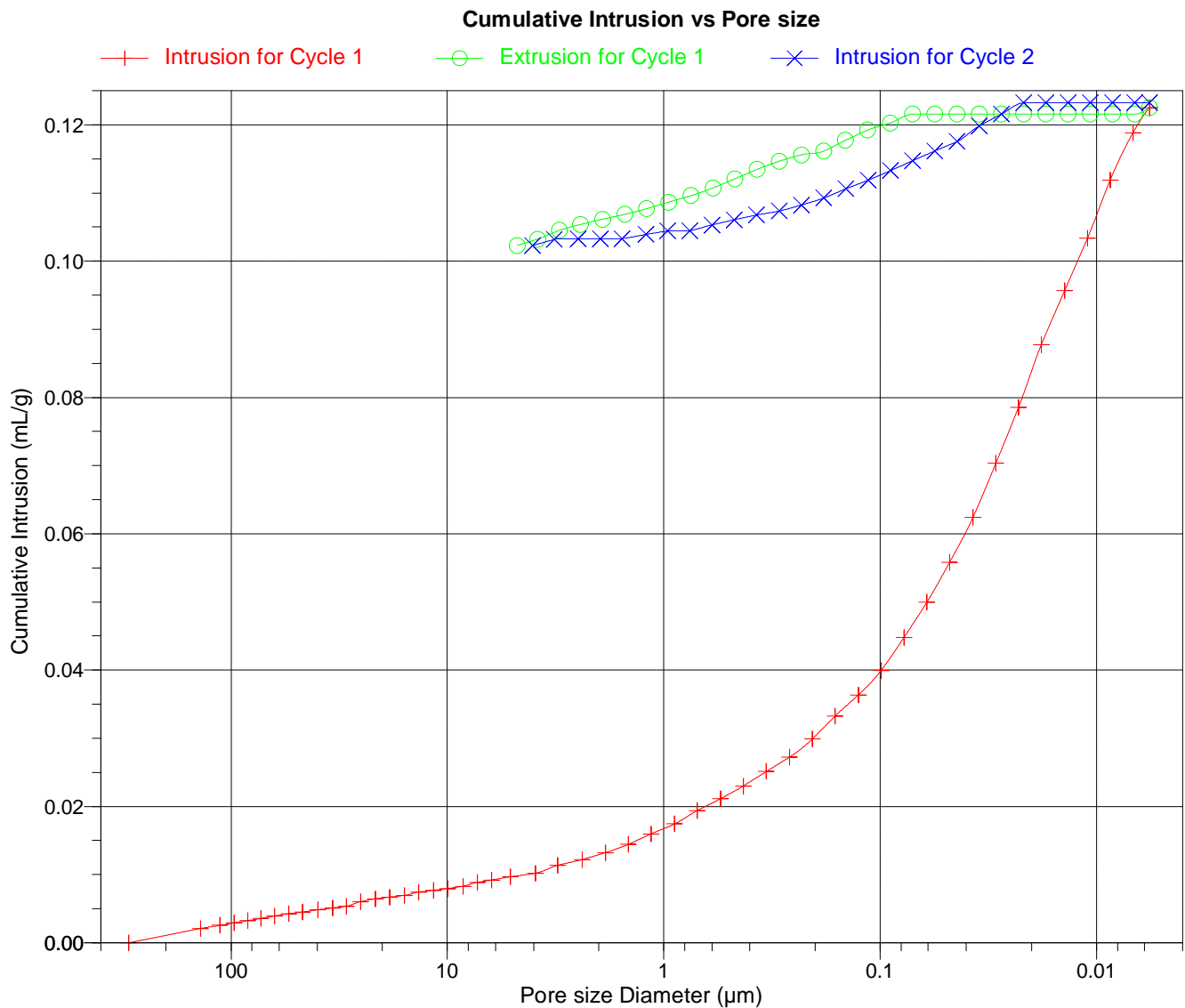
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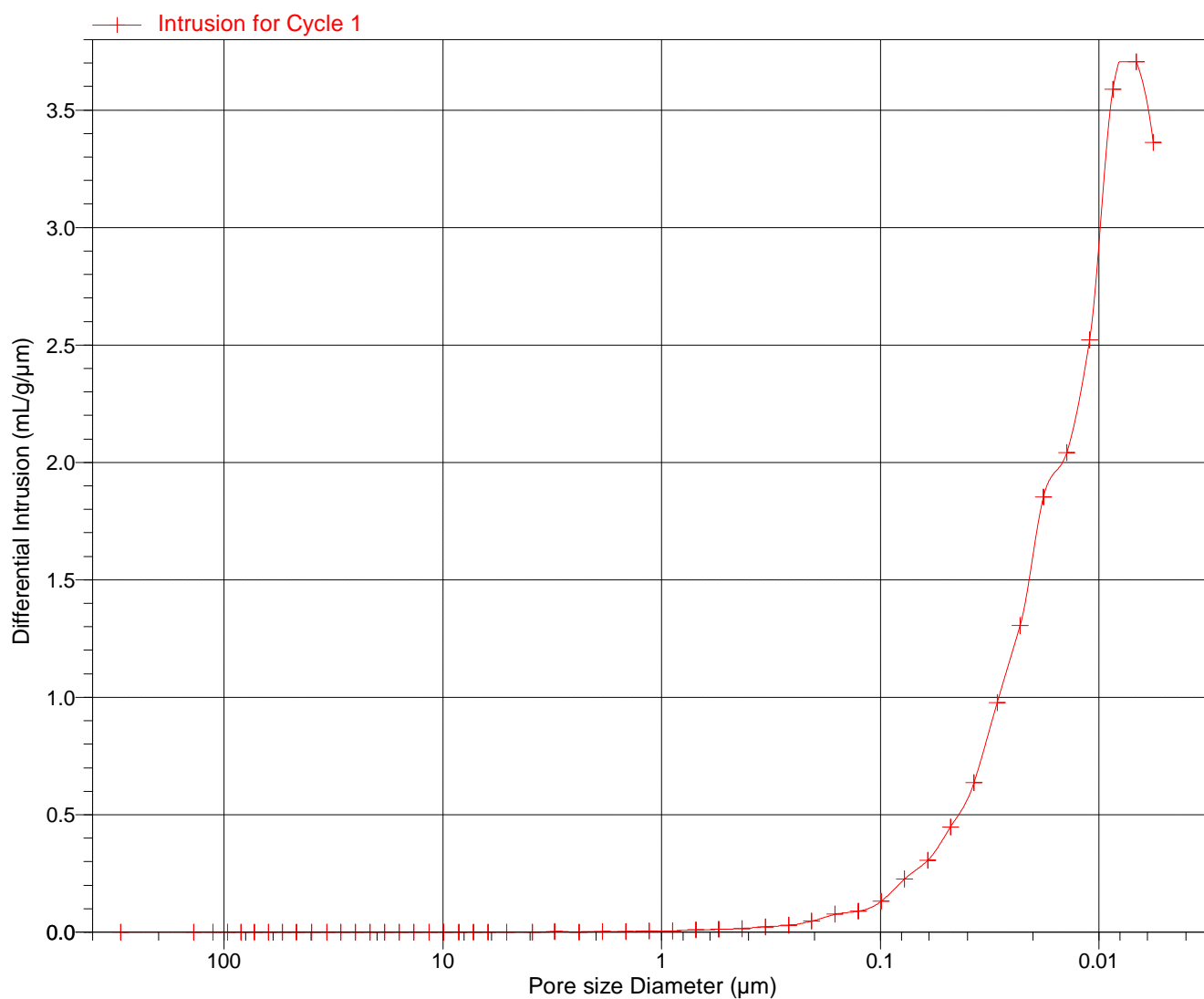
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Differential Intrusion vs Pore size



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Log Differential Intrusion vs Pore size

