

APPLICATION NOTE, APPN-04

Technology: Porometry

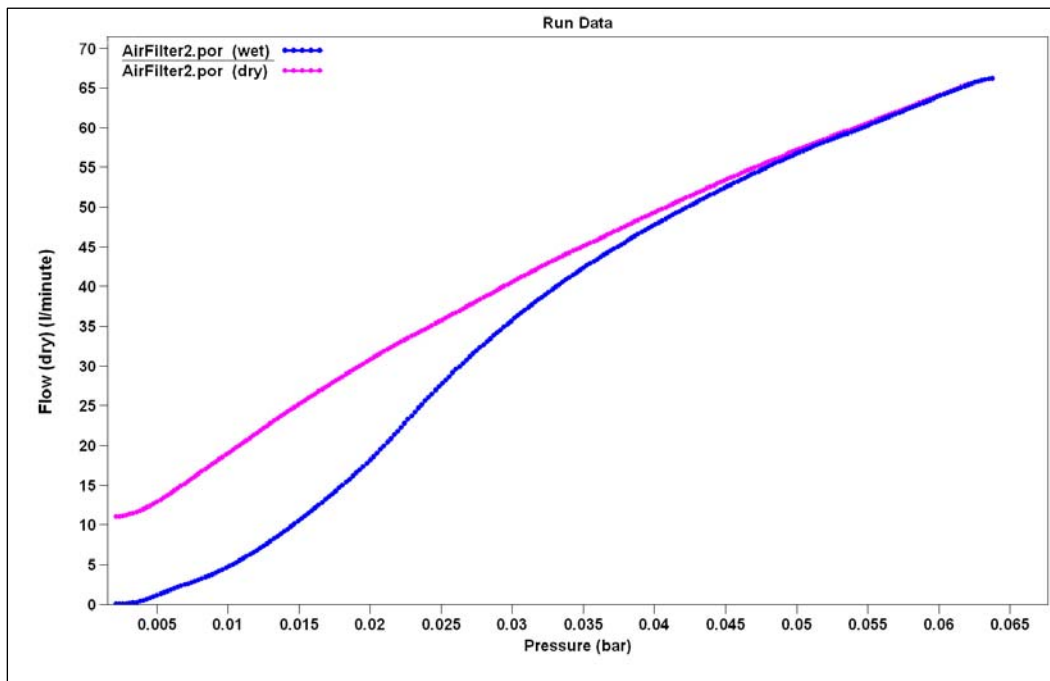
Subject: Measurement of Air Filter Pore Size

Applicability: Porometers 3G, 3Gz, Macro

Issue: Revision A

The measurement of pore size data for automotive and other air filters with Porometry is very straightforward. These samples were measured with a Porometer 3G. The relatively large pore sizes of these samples meant that the operational pressure range was low at 0.002 to 0.08 bar. This corresponded to a pore size range of 300 to 10 μm using Porofil, a wetting fluid with a surface tension of 16 mN/m. The run time for these samples was approximately 8 minutes each.

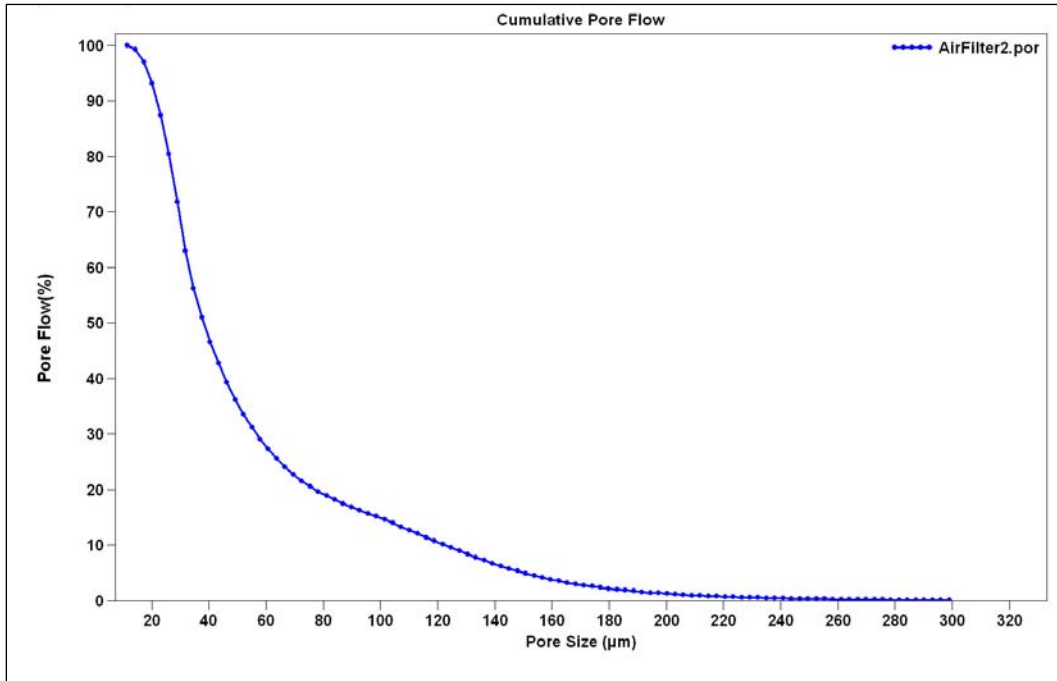
One air filter sample is presented alone for clarity followed by an overlay of this sample with two others.



The corresponding calculated Maximum (Bubble Point), Mean Flow Pore Size (MFP) and Minimum Pore Sizes are shown below:

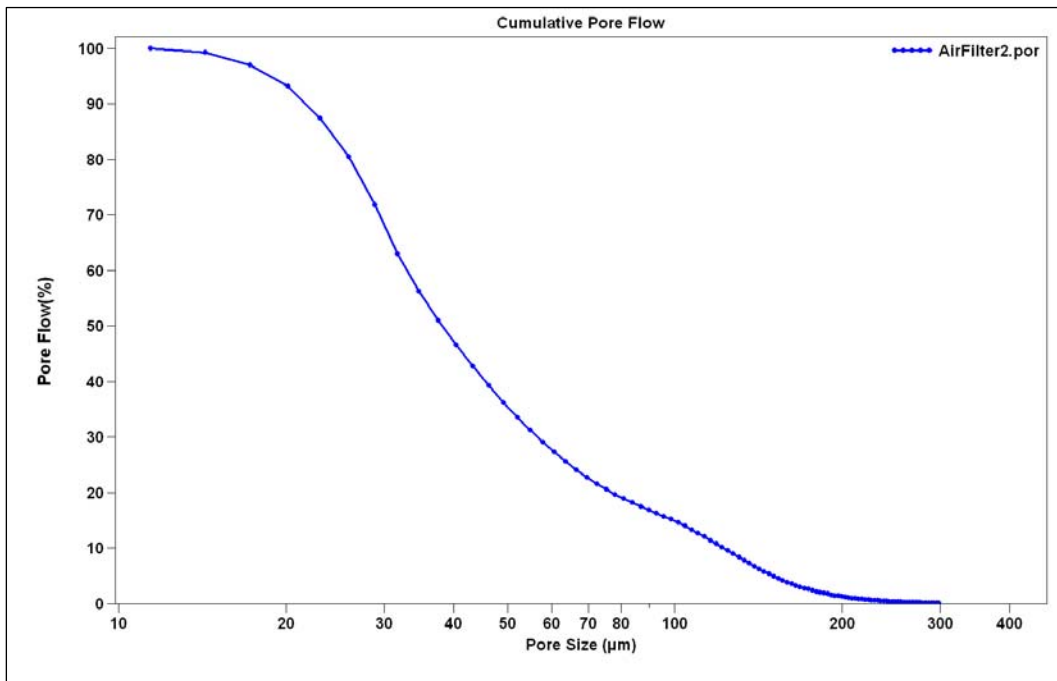
Calculations from 10.04 μm to 300.5 μm

Minimum pore size: 15.8 μm
Maximum pore size: 157 μm
MFP pore size: 36.2 μm

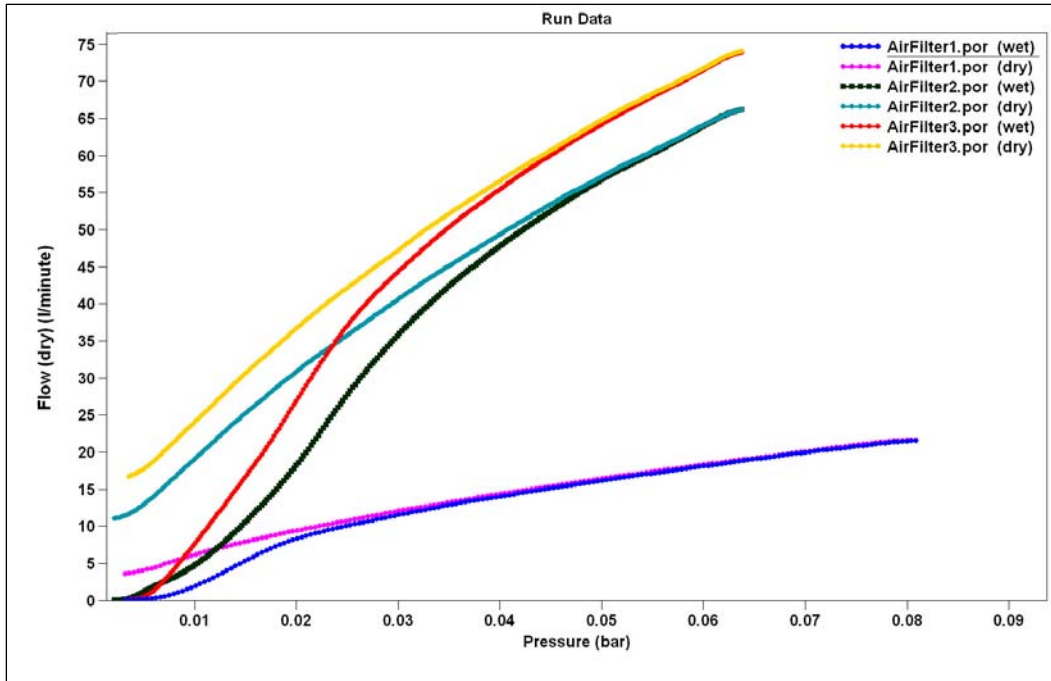


Pore Size Distributions

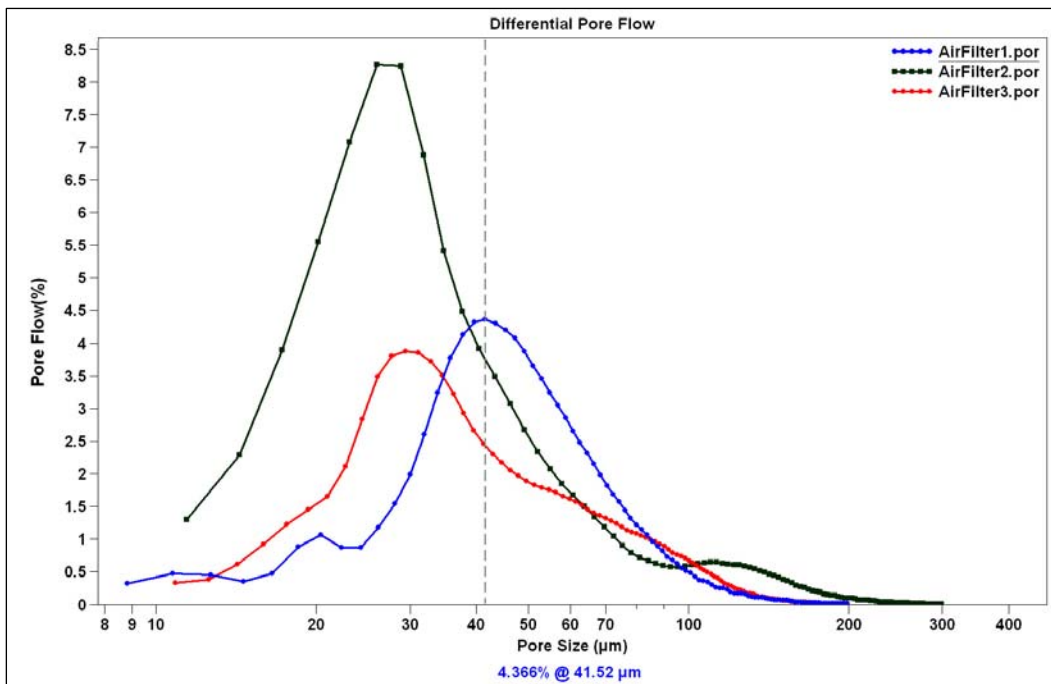
The above plot is the calculated cumulative pore size distribution. The plot below is the same data presented with the pore size plotted in log form.



Overlay Plots for Three Air Filter Samples



Run Data



Differential Flow Distribution Plot