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**A porometer round robin program using filter media at a range of pore sizes**

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Category: 2 Filter Testing

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A round robin program was undertaken to evaluate the techniques and methods used during the operation of various porometers. Two companies participated in the round robin testing a total of nine Porous Materials, Inc. (PMI) porometers at various locations throughout the world. A range of track-etched polycarbonate membranes (5 $\mu$ m - 20 $\mu$ m), a woven screen (105  $\mu$ m), a woven belt (170 $\mu$ m), and two expanded PTFE membranes (1-3  $\mu$ m) were run on the porometer units for comparison. The samples were processed on each porometer using identical wetting liquid, support plates, and parameter file throughout the program. The experimental data are discussed with possible explanations for the deviations presented. The results indicate that the industry should focus on standardizing equipment design and a procedure for testing to ensure an accurate comparison among porometers.

Key words: porometry, round robin testing, filter media, characterization

Bio

Dr. Uwe Beuscher is a senior filtration technologist for W.L. Gore & Associates, Inc. He has more than 15 years of experience exploring separations and mass transport problems for a variety of high performance applications using unique experimental approaches and numerical simulation. He has authored or co-authored more than 20 technical papers, book chapters, and presentations. He earned a Diplom-Engineer degree in Mechanical Engineering from RWTH Aachen University and holds a Ph.D. in Chemical Engineering from Clemson University.