

### **S3.3.2 LABORATORY “PLUG FLOW” COLUMN TESTS FOR ADSORBENT SELECTION AND PERFORMANCE INDICATION FOR HOUSEHOLD IAQ FILTERS**

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Both plain and impregnated activated carbons are used in household IAQ filters to remove selected contaminants. The performance of these filters is typically determined using various standard test methods in specially designed test chambers that simulate a indoor room. These tests can take several weeks to complete and depend not only on adsorbent performance but also filter design. As an activated carbon manufacturer, we desired to develop plug flow column tests to predict filter performance for these “room” tests that only involved adsorbent performance. This paper discusses the parameters involved to design such a test and presents results of these tests primarily focusing on formaldehyde removal and its correlation to filter performance in room tests.