

# MILLSAPS COLLEGE

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## Sorbency Test Results

Two particulate sorbents, identified as JSK MXG and OK 2016, were submitted to the Millsaps College Sorbent and Environmental Laboratory for sorbency testing. Testing was done using protocol in American Society for Testing and Materials (ASTM) F 726 – 12 - *Standard Method of Testing Sorbent Performance of Adsorbents*. The particulates are classified as a *Type II* sorbents by ASTM and were evaluated using the Oil Adsorption – Short Test (paragraphs 9.3, 9.3.2, and 9.3.2.1) in used motor oil. The sorbents were also evaluated using the Dynamic Degradation protocol (paragraphs 9.2, 9.2.2, and 9.2.2.1). The fine-grained nature of the sorbents required that testing be done in nylon hosiery socks to prevent loss of material during sorbency tests. The sorbency of the sock was not included in results. Although the OK 2016 was coarse enough to be tested in a metal basket, it was tested in nylon socks so comparison could be made to other products tested in April 2017. Sorbency values are reported as a ratio of fluid adsorbed relative to the dry weight of the sorbent. Tests were run in triplicate in each fluid.

The results of testing are summarized in Tables 1. Fluid density values, raw data, and sorbency values are included in Appendices A. The sorbency values of the two products was similar at approximately 2.1. During the Dynamic Degradation test more than 10% of the JSK MXG sank to the bottom of the jar. The Ok 2016 passed the test but did not adsorb all the oil added to the test jar.

Table 1. 15 min. sorbency with standard deviation and Dynamic Degradation Test Results.

<b>Used Motor Oil</b>	<b>15 Min. - Short Test</b>	<b>Dyn. Deg.</b>	<b>Water Take-up</b>	<b>Observations</b>
JSK MXG	2.10 ± 0.06	Fail	4.66	NA
OK 2016	2.16 ± 0.14	Pass	8.61	Oil on surface

Thank you,

Sincerely,

*Stan Galicki*

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