

Operator Sensitivity in Testing Oil Absorbency of Paper

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ABSTRACT

The penetration of oily substances into paper is important in many grades of paper, for example, the papers to be printed with oil based inks, papers to be coated with paraffin, or papers to be used in contact with greasy foods. The available methods for evaluation of oil absorbency of paper are mostly subjective in nature and suffer from high variability of test results. We have evaluated material and operator variability for the castor oil penetration test method which is considered most appropriate for such applications. The experiments reveal that the values obtained from this test are highly operator sensitive. The test can be gainfully used for quality control purpose within a mill when conducted by one operator but, it has limited value for comparison of results obtained by different operators in different laboratories.

Key words: Oil absorbency, Castor oil penetration, Variability, Operator sensitivity, Repeatability, Reproducibility