

Bachelor-Thesis

Title: “Thermoanalytical and filtration performance investigation
of particulate filter media.”

Abstract:

Thermal analysis, DSC, TGA, particulate air filtration, glass microfiber, EN 1822

In this thesis the most relevant filter paper media producers in the global markets are being studied with thermal analysis. The purpose of this is to identify and differentiate the materials used in the filter media and characterize their filtration properties. Consecutively, several filter-producing companies are also analyzed with thermal analysis in order to identify the filter media type used in their products. Differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA) were used to examine the samples. Fractional filtration efficiency (including most penetrating particle size) and pressure drop are measured according to the European standard EN1822 to evaluate the performance of the filters.

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