São Paulo - Brazil - May - 22nd to 24th - 2013

4th INTERNATIONAL WORKSHOP
ADVANCES IN CLEANER PRODUCTION

''INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES''

Determination of Moisture in Tobacco Leaves through The Microwave Technique

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Abstract

The determination of moisture in various industrial processes is very important to monitoring the quality of raw materials and products. As a result, a technique fast, cheap and reliable for determining moisture is an object of interest to all companies. In the tobacco industry, traditionally, determines humidity by the mass loss, a destructive technique, slow and random sampling. This study aims to validate the technique for determination of moisture in processed tobacco leaves through the use of microwaves. The microwave moisture determination technique is fast, easy, low-cost analysis, earnings stability and able to analyze 100% of the population, so this study is justified by the importance in seeking improvements in the process. Through the variance analysis as statistical tools for analysis of results these two techniques, weight loss and microwave, was compared and verified that there is a low dispersion of the measured values and similarity in the measures. So, in addition to a gain in time and preservation of samples, there is no waste generation with the microwave technique, when compared to the technique of mass loss, demonstrating environmental gains beyond the technical gains, also showing up as reliable as conventional methodology for moisture content determination.

Keywords: *microwave, tobacco moisture, techniques for moisture determination*