



## Third International Congress on Cocoa Coffee and Tea



**Abstract:** (Your abstract must use **Normal style** and must fit in this box. Your abstract should be no longer than 300 words. The box will 'expand' over 2 pages as you add text/diagrams into it.)

The quality of coffee beans is a determining factor in the commercialization of the product in the international market. Currently, the tests used to evaluate the quality are inefficient, because demand a long time, can bring subjective results and depend on several factors such as the evaluator. In this sense the availability of rapid methodologies that can be used to assess the quality of beans, such as analysis of image has great potential to assist in the evaluation of beans and a rapid and non-destructive process.

The research aimed to evaluate the potential of biophotonics technology, through ultraweak emission detection of light and the use of image analysis using the SAS® equipment in monitors quality of coffee beans in large scale.

For the biophotonic tests, 18 samples of coffee with different levels quality were used, of which the images were taken in the darkroom measuring photons. The biophotonic data of the coffee beans were analyzed with base in the count incidences on the temporal profile and distribution of counts samples in order to correlate different levels of quality of batches.

Pictures were also taken of the coffee beans through SAS® equipment. The results obtained through two methods were compared to the chemical and sensory analysis of the samples.

Considering the preliminary results, the analysis of images by SAS® and biophotonic technique have potential to evaluate coffee beans with different levels of quality.

**Key words:** Coffee quality; ultraweak emission detection; imaging analysis.