

## **Analyses of Organic Acids and Phenolic Compounds in Columbia Coffee Bean in Roasting Process**

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Coffee is one of the most popular drinks in the world. Roasting process of coffee bean is one of major steps to make coffee, however, there are few studies which analyzed chemical compounds in intermediate state of roasting coffee beans due to technical limitations to get coffee beans with the same roasting condition. We utilized Stronghold S7 pro roasting machine which guarantees the same roasting conditions repeatedly with the aid of precise computer to control heat sources to get 20 steps (every 30 seconds) of roasted coffee beans during roasting process (10 min in total). Along with roasting process, phenolic compounds were decreased, which can be explained that roasting process cause phenolic compounds degradation. Caffeine is almost constant during roasting, reflecting that caffeine is not affected in roasting process. These samples presents that organic acids significantly increase along with the roasting process by HPLC analysis. With additional analysis of coffee beans, such as moisture contents, pH, as well as coffee tastes, our analysis will show detailed process of chemical compounds of coffee beans during roasting process.

**Key words:** Coffee, Columbia, Organic acids, Phenolic compounds, Roasting process