

## **Drying characteristics and nutritive analysis of coffee beans under different drying methods**

### **ABSTRACT**

Drying under certain conditions can result in degradation in terms of the nutritional value of dried products which then affects the consumer acceptability directly. In this study, the effects of three drying methods – open sun drying (OSD), solar dryer (SD), and solar-electrical hybrid dryer (S-EHD) for coffee beans were identified. Parameters observed include weight loss, drying rate, and nutritive value of dried coffee beans. Based on the data obtained, OSD with the highest temperature of 48 °C exhibits the highest moisture loss and drying rate throughout the drying period of 50 hours. Followed by S-EHD with drying temperature controlled at 45 °C and SD under natural convection. High drying temperature was expected to offer a rapid drying rate. The drying temperature attained in both S-EHD and SD does not exceed the acceptable limit for coffee bean drying. Based on the nutritive analysis, S-EHD dried coffee beans contain the highest protein value with the lowest fat content. Whereas, ash content obtained from different drying methods was insignificantly different.