Effect of drying processes on the quality of coffee pulp and green coffee beans

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Outline

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Abstract

Coffee bean is one of the most traded commodities globally. Furthermore, it is the most important agricultural product whose production brings considerable economic benefits to certain developing tropical countries. The use of green coffee beans and coffee pulp recently gained considerable attention in the nutraceutical and pharmaceutical industries due to their high antioxidant content and radical scavenging activities. Microwave Vacuum Drying processing of green coffee beans resulted in increased of b*, L*, ΔE, TPC values, and antioxidant capacity. Besides, the conditions of drying totally affected the quality of coffee pulp. The best method which could preserve the highest bioactive compounds of dried coffee pulp was freeze drying, which showed 4.94 ± 0.06 mg/g DW of chlorogenic acid, 12.64 ± 0.07 mg GAE/g DW of TPC, and 2.84 ± 0.01 mg TE/g DW of DPPH, respectively. Regarding as its ability of high bioactive compounds preservation, freeze drying was recommended for producing a higher quality of dried coffee pulp. Therefore, novel drying methods showed great potential for coffee pretreatment.

Reference

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