

## COFFEE DRYING IN A ROTARY CONDUCTION-TYPE HEATING UNIT

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Publication date

2004/6/1

Journal

Journal of food process engineering

Volume

27

Issue

2

Pages

143-157

Publisher

Blackwell Publishing Ltd

### **ABSTRACT**

Parchment coffee (Arabica) was dried from an initial moisture content of about 90% to 10% dry basis (db) in a recirculating rotary conduction type heating unit at controlled plenum temperatures of 100, 120 and 140C or controlled product temperatures of 50, 60, and 70C. the temperature of the plenum or moving beans could be maintained at specified levels with small variations during coffee drying experiments. the color and specific gravity of coffee beans exhibited minimum changes as a result of drying operations. the susceptibility of coffee beans to breakage decreased with the lowering of moisture and attained minimum values in the moisture content range of 20 to 30% db. the breakage susceptibility increased sharply with further reduction in moisture content. A drying model, which considered product temperature-time history alone under different operating conditions, estimated the change in moisture content adequately. Such a model could be used for computer-based control of the coffee drying process.

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