

**EFFECTS OF HARVEST TIME AND DRYING TEMPERATURE
ON ESSENTIAL OIL CONTENT AND COMPOSITION IN
LAVANDIN**

(*Lavandula x intermedia* Emerice x Loisel.)

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ABSTRACT

Lavandin is one of the most important aromatic plants producing high-value essential oil, which is used in the fragrance and cosmetic industries. This work aimed to assess the influence of the harvest time and drying temperature on essential oil content and composition in lavandin (*Lavandula x intermedia* Emeric ex Loisel. var. Super A). The fresh flowers which was harvested in four different dates (on 8, 15, 22 and 29 July 2005) and oven-dried at four different temperatures (at 30, 40, 50 and 60 °C). The essential oil was extracted from dried lavandin flowers without stem by Clevenger type hydro-distillation, and analyzed by gas chromatography-mass spectrometry (GC/MS). Two major components of the essential oil were linalool and linalyl acetate. Harvest time influenced the content and composition of the essential oil. Essential oil content (% v/w) decreased from the first harvest (8.25%) to the last harvest (7.30%). The highest linalool content (43.05-43.65%) was at the middle of the flowering season (on 15-22 July 2005), and the highest linalyl acetate content (25.96%) was at the end of the flowering season (on 29 July 2005). Essential oil content and composition were also importantly influenced by the oven-drying temperature. 75.4% of essential oil was lost during oven drying at 60 °C compared to drying at 30°C. There was decreasing in concentrations of linalool (from 42.91 to 34.13%), and increasing in concentrations of linalyl acetate (26.11 to 32.55%), when comparing essential oil composition from 30 °C to 60 °C treatments.

Key Word Index: *Lavandin, harvest time, drying, essential oil content and composition*