Sedative effect of vapor inhalation of essential oil from *Heracleum afghanicum* Kitamura seeds

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*Heracleum afghanicum* (Apiaceae) is a perennial plant indigenous to Afghanistan. Phytochemical and pharmacological analyses of *H. afghanicum* seeds essential oil were carried out to investigate its possible sedative effects on mice spontaneous locomotor activity. The essential oil was analyzed by gas chromatography (GC) and GC/mass spectrometry (GC/MS), and thirty-three constituents were identified. Hexyl butyrate (34.3%) and octyl acetate (21.1%) were found as its principal constituents. The sedative effect of *H. afghanicum* essential oil was confirmed using an open field test with ddY mice. The essential oil significantly decreased the locomotor activity of mice, suggesting its sedative effect. Hexyl butyrate and octyl acetate were found to be responsible for the sedative activity of *H. afghanicum* seeds essential oil.

**Keywords:** *Heracleum afghanicum*; Apiaceae; essential oil composition; vapor inhalation; sedative effect; aliphatic esters; hexyl butyrate; octyl acetate