



## Comparison of the volatile fractions of *Brugmansia suaveolens* flower using solid-phase microextraction (HS-SPME) and gas chromatography coupled to mass spectrometry (GC-MS)

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The Solanaceae family is distributed mainly in tropical areas. It has more than 2,600 species grown industrially in many countries. The genus *Brugmansia* belongs to this family. It is characterized by a strong and pleasant flower fragrance, especially at night. *Brugmansia suaveolens* is native to South America. It is a 2-4 m tall shrub with many branches and elliptical – ovate leaves. It presents pendulous hermaphrodite flowers of about 35 cm in length, with tubular calyx and corolla that can be white or pink at the base and orange toward the apex. The aim of this work is to study the chemical composition of the volatile fraction of *B. suaveolens* flowers at different times of the day (6 am, 12 pm, 6 pm). *B. suaveolens* flowers (16 g) were weighed, placed in a glass container and left to thermally equilibrate at 60 °C (10 min), before exposing a Carboxen-PDMS coated SPME fiber (30 min at 60 °C). The analysis was performed on a 6890N gas chromatograph (Agilent Technologies, Palo Alto, CA, USA) coupled to a 5975C mass selective detector MSD (AT, EI, 70 eV). Split (30:1) injection was used. A DB-WAX (J & W Scientific, Folsom, CA, USA) of 60 m X 0.25 mm (i.d.) X 0.25 µm (d<sub>f</sub>) was used. At 6 am, *trans*-β-ocimene (69 %) was identified as the main component of *B. suaveolens* flower scent, followed by 1,8-cineole (9 %) and *allo*-ocimene (3 %). At 12 pm, *trans*-β-ocimene (67 %) was followed by 1,8-cineole (8 %) and linalool (7 %). At night, the main components were *trans*-β-ocimene (45 %), β-nerolidol (10 %) and 1,8-cineole (9 %). The main component *trans*-β-ocimene is one of the most common monoterpenes in floral scents.

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