

# Increase in Composition of Patchoulol by Hydrotropic Extraction Combined with Ultrasound †

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**Abstract:** Patchouli Plant is a medicinal herb which on extraction, produces patchouli oil. Patchoulol, an imperative and bioactive compound present in the oil, is mainly extracted from the leaves and stems of the patchouli plant and has extensive usage in the perfumery industries. To enhance the composition of patchoulol in patchouli oil, a combined technique of hydrotropy and sonication was assessed by employing different hydrotropes, namely, *p*-toluene sulphonic acid resorcinol, sodium cumene sulphonate, and sodium salicylate. Effect of different factors such as extraction time (min), sonication amplitude (%), and pulse interval (s) with 2 M concentration of hydrotropes was studied. This combined technique has improved the content of patchoulol in the fragrant oil. The highest composition of patchoulol, i.e., 70.06 %, was obtained for 5 min extraction time, 40 % ultrasound amplitude, 30:30 s pulse interval for sodium salicylate at 2 M concentration. This study has shown a promising way to enrich the patchouli oil using sonication-based hydrotropy.

**Keywords:** extraction; hydrotropes; *Pogostemon Cablin* benth; sodium salicylate; ultrasonication.

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