

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF *CITRUS HYSTRIX*
EXPOSURE ON COGNITIVE
PERFORMANCE VIA EMOTIVE
RESPONSES**

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ABSTRACT

Citrus hystrix has a pungent and zesty smell and it is well known as a taste enhancer for Malaysian dishes. Hence, the purpose of this research is to further evaluate the effects of *Citrus hystrix* aroma on cognitive performance. *Citrus hystrix* peels were extracted using hydro distillation method. 54 subjects participated in the experiment. RFI frequency measurement for each participant was taken in anechoic chamber before and after being exposed to the aroma. There were six points of measurement on the head starting from the left (L) to the right (R), four points at the central axis along the head; anterior frontal lobe (cF), posterior frontal lobe (cG), parietal lobe (cH) and cerebellum lobe (cJ). The data were recorded on a digital recorder and translated into a meaning using biofrequency software. Data collected were analyzed using interactive chart, histogram, and comparable clustered column before and after *Citrus hystrix* exposure. The major essential oil compounds discovered in the peels of *Citrus hystrix* were Citronellal (21.79%), Citronellol (16.62%), α/β -pinene (6.85%) and Limonene (3.93%). Results showed that *Citrus hystrix* aroma is capable of invigorating positive whilst reducing negative moods. Hence, a new report on the effect of *Citrus hystrix*, which activates all six areas of interest, has been documented in this research. The findings may be applied as a fundamental guideline for in-depth clinical studies to assess therapeutic effect on cognitive performance.

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