# CHEMCICAL CONSTITUENTS IN VOLATILE OILS OF *CINNAMOMUM PORECTUM* (ROXB.) KOSTERM. FROM PANG-NGA AND SONGKHLA PROVINCES

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## ABSTRACT

Studying on volatile oils in leaves, green fruits, ripe fruit and wood of *Cinnamomum porrectum* (ROXB.) KOSTERM. from Southern Literature Botanical Garden in Songkhla province, Wat Nirot Rangsi and Tai Muang farm in Pang-nga province, by water distillation. Oil yields were reported base on oven dry weight showed that volatile fruits oils had the maximum yield 3.50 – 10.54%, followed with volatile wood oils 3.85% and volatile leaves oils showed the lowest yield 0.43 – 0.72.%. Analyzed the chemical compositions of volatile oils by GC-MS and identified them by compared retention time and mass spectra chromatogram with standard library. The results found that the major components in volatile oils from wood was safrole (97.71 %), in leaves and fruits were divided in to 4 groups: volatile oils that had safrole as major component (90.92 – 96.02 %) gave root beer odor, volatile oils that had Z-Citral (8.43 – 36.99 %), E-citral (28.88 – 50.18 %), Citronellol (1.82 – 17.28 %) and Limonene (0.12 – 12.02 %) as major component gave lemon grass and orange odor, volatile oils that had 1,8-cineole as major component (57.66 – 61.61 %) gave cajuput odor, volatile oils that had Linalool as major component (95.01 %) gave flower and spice odor. Chemical compositions in green fruits and ripe fruits of lemongrass odor were not so different. They composed of 1,3,8-p-menthatriene 41.16-43.13% and Citral 46.86-49.49 %, but in root beer odor, green fruits had safrole only 26.71 %, ripe fruits had safrole 90.68 %. Utilization of volatile oils depended on theirs chemical compositions.

**Keywords :** Volatile oils, *Cinnamomum porrectum*, Safrole, Citral, Citronellol, 1,8-cineole, Linalool