

# **Analysis of Aroma Profile of Agarwood Incense Smoke by SPME and GC-FID combined with GC-MS**

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## **ABSTRACT**

Analysis of the aroma profile of agarwood incense smoke by varying the sampling time is presented in this study. The compound extraction was performed with the implementation of using Gas Chromatography – Flame Ionization Detector (GC-FID), Gas Chromatography – Mass Spectroscopy (GC-MS) and Solid Phase Microextraction (SPME) on commercial, low and high quality agarwood. The extraction is based on agarwood smoke and headspace volatile (vapor) via SPME fibre type DVB-CAR-PDMS under three different sampling 15 minutes, 30 minutes and 60 minutes. The result revealed that the agarwood smoke are made of three major groups, monoterpene hydrocarbon, sesquiterpene hydrocarbon and oxygenated sesquiterpene. The decreasing of chemical compounds composition in several compounds during the extraction showed that sampling time gave effect to the compounds composition. The finding is very significant and it is beneficial for further analysis especially for agarwood grading.