

UNIVERSITI TEKNOLOGI MARA

**SCREENING ALKALOIDS FROM THE
METHANOL EXTRACT OF *PAPAVR* SEEDS**

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ABSTRACT

The poppy seeds distributors claim that the poppy seeds do not contain any narcotic effect. Therefore, a research was performed to investigate this statement. The methodology includes screening the alkaloids in the seeds extract using the Thin Layer Chromatography (TLC). The hypothesis of the research is that the sample of poppy seeds contains opium. Another objective of this research is to discuss about the addiction of opium and its current cases as opium is an extremely addictive drug. Parts of the poppy that can be utilized in making tea are the pods, the seeds and the poppy straw. There were many cases of poppy seed and opium abuse reported in several countries. Demonstrating the use of illicit opium poppy products by the detection of morphine, codeine and their metabolites are not straightforward as those opiates also can be detected from the consumption of pharmaceutical opiates drugs except thebaine which can be used as a potential indicator. The poppy seeds were extracted with methanol and later the detection for alkaloids in poppy seeds and TLC were performed. The detection of alkaloids using Mayer's and Bouchardat's reagents showed positive results as the samples turned into suitable colour changes. Dragendorff's reagent managed to display the alkaloids of the poppy seeds in simple detection method but failed to screen the alkaloids on the silica TLC plate. The similar outcomes happened using the reverse-phase TLC. Another alternative, the anisaldehyde sulphuric acid managed to bring out better chromatography profile of the extracts. It proved the presence of phenolic-containing alkaloid, most probably morphine which is the main alkaloid of opium. The best chromatography obtained when using the mobile phase of toluene to ethyl acetate at concentration 70:30. The study supports the hypothesis that the alkaloids or opium are present in the poppy seeds. Finally, the statement claimed by the poppy seed distributors that the poppy seeds do not contain opium could not be proven.