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AYURVEDIC PREPARATIONS CONTAINING CANNABIS

- SOME ANALYTICAL ASPECTS OF PHARMACOLOGICAL AND LEGAL IMPORTANCE

BY

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AYURVEDIC PREPARATIONS CONTAINING CANNABIS - SOME ANALYTICAL ASPECTS OF PHARMACOLOGICAL AND LEGAL IMPORTANCE

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ABSTRACT

Ayurvedic preparations containing varying amounts of Cannabis are freely available in Sri Lanka. These narcotic preparations are being abused by youngsters including school children which poses a threat not only to their health but also to society. However current narcotics legislation in Sri Lanka does not cover these preparations. "Madana Modakaya" (MM) is the most popular preparation currently available.

The aim of this study was to develop a method to quantify the Δ^9-Tetrahydrocannabinol (Δ^9-THC) levels in MM, to use this method to analyse market samples and to study how the manufacturing process affected the final level of Δ^9-THC in the product. It is hoped that this data will enable the authorities to legislate for permissible levels of Δ^9-THC in MM, and that the method developed would be used as the official method of analysis.

A method to quantify Δ^9-THC in MM was developed. The method which involved solvent extraction and column chromatography followed by GC, was validated by the standard addition recovery method. In the study of the methods for the preparation of MM, TLC densitometry was used

in quantifying Δ^9-THC, Cannabidiol and Cannabinol. A laboratory sample prepared according to the Ayurvedic Pharmacopoeia was used as the standard preparation.

A field survey revealed that there were over 20 brands of MM in the market. The price and weight of a packet (single dose) varied from 3-5 rupees and 5.70 - 10.01 g respectively. The Δ^9-THC content varied from 0.0183 % to 0.0747 % (w/w).

None of the samples of the 23 brands studied contained atropine, indicating that the popular belief that MM is adulterated with Datura seeds is not true.

The Ayurvedic Pharmacopoeia describes two methods for "detoxification" of Cannabis prior to incorporation in the drug. It was shown that one of the method, namely frying in ghee, resulted in the reduction of Δ^9-THC approximately by 50 %.

Based on data obtained on the standard sample and data on the highest levels of Δ^9-THC found in local Cannabis, a permissible maximum of 0.031 % (w/w) of Δ^9-THC in MM is proposed.