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

BY

DAUNDASEKARA MUDIYANSELAGE
UPUL JANAKA ABEYSINGHE

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

A method to quantify $\Delta^9$-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 $\Delta^9$-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 $\Delta^9$-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 $\Delta^9$-THC approximately by 50 %.

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

<table>
<thead>
<tr>
<th>LIST OF CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td></td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td></td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td></td>
</tr>
<tr>
<td>ABSTRACT</td>
<td></td>
</tr>
</tbody>
</table>

### 1. INTRODUCTION

1.1 Ayurveda  
1.2 Narcotic drugs  
1.2.1 Medical definition  
1.2.2 Legal definition  
1.2.3 Definition based on pharmacological effect  
1.3 *Cannabis sativa* plant  
1.3.1 Uses of Cannabis plants  
1.3.2 Classification of plant  
1.3.2.1 Species of genus Cannabis  
1.3.3 Chemical constituents  
1.3.4 Cannabinoids  
1.3.5 Numbering system of cannabinoids  
1.3.6 Synthetic cannabinoids  
1.3.7 Structure activity relationship  
1.3.8 Stability of $\Delta^9$-THC  
1.3.9 Identification of cannabinoids  
1.4 Administration of Cannabis/Cannabis preparations  
1.4.1 Consumption of Cannabis by smoking
1.4.2 Oral ingestion 25
1.4.3 Parenteral administration (by Injection) 25

1.5 Pharmacology of $\Delta^9$-THC 26
1.5.1 Distribution of $\Delta^9$-THC in the body 26
1.5.2 Effect on the brain 26
1.5.3 $\Delta^9$-THC metabolism 27
1.5.4 Health hazards 30
   1.5.4.1 Consumption of Cannabis alone 30
   1.5.4.2 Consumption of Cannabis and alcohol 30
1.5.5 Excretion of $\Delta^9$-THC 32
1.5.6 Medicinal aspects of Cannabis 33

1.6 Availability of Cannabis products 34
1.6.1 Illicit Cannabis products 34
1.6.2 Cannabis related arrests 35
1.6.3 Responsible Legal Authorities 35
1.6.4 Legislation on Cannabis 35

1.7 Cannabis containing Ayurvedic drugs 35
1.7.1 Production and sale 38
   1.7.1.1 By Ayurvedic physicians 38
   1.7.1.2 By Government institutions 38
   1.7.1.3 By private Institutions and manufacturers 40

1.8 Detoxification of Cannabis 40
1.8.1. Acacia tree 41

1.9 Adulteration of Madana Modakaya (MM) 41
1.9.1 Traditional uses of Datura plant 46
1.9.2 Active ingredients of Datura 46
1.9.3 Abuse of Datura
1.9.4 Pharmacological effect
1.9.5 Identification

1.10 Objectives of the present study

2. EXPERIMENTAL

2.1 Equipment and materials
2.1.1 Equipment
2.1.2 Materials

2.2 Samples
2.2.1 Standard samples
2.2.2 Madana Modakaya (MM)
2.2.3 Cannabis plants

2.3 Total extraction of $\Delta^9$-THC
2.3.1. Determination of the best solvent for extraction of $\Delta^9$-THC from Cannabis leaves and MM
2.3.1.1 Cannabis leaves
2.3.1.2 MM

2.4 Qualitative analysis
2.4.1 Thin Layer Chromatography (TLC)
2.4.1.1 Developing solvent system
2.4.1.2 Visualization
2.4.1.2.1 Preparation of visualization reagent
2.4.2 Gas Chromatography (GC)
2.10.2.1 Samples  
2.10.2.2 Extraction  
2.10.2.3 Detection  

3. RESULTS AND DISCUSSION  

3.1 Field samples  
3.1.1 Availability of Cannabis containing products  
3.1.2 Manufacturers of MM  
3.1.3 Availability of MM for customers  
3.1.4 Packaging and pricing of MM  
3.1.5 The dosage and users  

3.2 Quantification of $\Delta^9$-THC in MM  
3.2.1 Methodological problems  
3.2.2 Total extraction of $\Delta^9$-THC  
3.2.3 Gas Chromatographic analysis  
3.2.3.1 Sample preparation for GC  
3.2.4 Accuracy of the method  
3.2.5 Effect of the presence of $\Delta^9$-THCA on the analysis of $\Delta^9$-THC  

3.3 Analysis of market samples of MM  
3.3.1 Variation of $\Delta^9$-THC % within packets in a package  
3.3.2 Variation of $\Delta^9$-THC % amongst different Brands  
3.3.3 Effects of $\Delta^9$-THC on human beings  

3.4. Effect of preparative method on $\Delta^9$-THC levels
3.5 Detoxification of Cannabis

3.5.1 Detoxification effect of "Ghee"

3.5.1.1 The stability of $\Delta^9$-THC in ghee at 140 °C

3.5.1.2 Comparative extractability of $\Delta^9$-THC in various media

3.5.2 Detoxification effect of Acacia

3.5.3 The importance of detoxification

3.6 Production, consumption and narcotic level of Cannabis preparations

3.6.1 "Authorized" manufacture of MM

3.6.2 Consumption of Cannabis for the preparation of Ayurvedic drugs

3.6.3 The narcotic level of MM preparations

3.6.3.1 Estimation of acceptable limits for $\Delta^9$-THC in MM

3.7 Adulteration of MM

3.7.1 Identification of Atropine/Scopolamine

3.8 Conclusion

4. REFERENCES

5. APPENDIX

5.1 Legislation on Cannabis

5.1.1 By United Nations

5.1.1.1 Definition of Cannabis

5.1.1.2 Definition of Hemp plant
5.1.2 Narcotics legislation of Sri Lanka

5.1.2.1 Penalty for Cannabis related offences

5.2 Questionnaire used for obtaining field information

5.2.1 Sale and availability of Madana Modakaya

5.2.2 Users of Madana Modakaya

5.3 Publications