IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals
ISSN 2349-7203
HUMAN

Human Journals
Research Article
September 2017 Vol.:10, Issue:2

TLC and HPTLC Analysis Report of Siddha Drug Oma Kudineer

IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals
ISSN 2349-7203
HUMAN

Dr. D. S. LAVANYA[1*], Dr. S. GANDHIMATHI[2], Dr. R. MEENAKUMARI[3]

*1*P. G. Scholar, P. G. Kuzhanthai Maruthuvam Dept, Govt. Siddha Medical College, Chennai, Tamilnadu, India*

2Guide, Govt. Siddha Medical College, Chennai, Tamilnadu, India

3H.O.D, P.G.Kuzhanthai Maruthuvam Dept, Govt. Siddha Medical College, Chennai, Tamilnadu, India

Submission: 25 August 2017
Accepted: 3 September 2017
Published: 30 September 2017

Keywords: TLC, HPTLC, siddha, oma kudineer, Standardization

ABSTRACT

Siddha products are natural products obtained from herbs, minerals and animals. With the growing awareness of siddha health care, people are moving towards siddha medicine due to its safety. Proper standardization of siddha drugs is mandatory to gain support for its use worldwide. Oma kudineer is a siddha sastric drug for the treatment of common cold in pediatric age group. The present study was carried out to standardize oma kudineer by evaluating its properties by Thin layer chromatography (TLC) and High performance Thin layer chromatography (HPTLC).

HUMAN JOURNALS
www.ijppr.humanjournals.com

INTRODUCTION

Herbs are used throughout developed and developing countries as home remedies. In traditional system of medicine, it has been used since antiquity. Oma kudineer is a polyherbal formulation which comprises of 4 drugs omam (*Carum copticum*), pepper (*Piper nigrum*), long pepper (*Piper longum*) and garlic (*Allium sativum*). Drug standardization is an essential factor for siddha formulation. In present study, TLC and HPTLC were carried out as per Indian pharmacopeia.

SAMPLE PREPARATION OF OMA KUDINEER

All the drugs were taken in equal ratio, purified and grinded to the powder form. Required quantity was taken from the grinded powder and mixed with pure water and this mixture was boiled until the concentrated decotation of the ingredient is obtained

TLC Analysis

Test sample OK was subjected to thin layer chromatography (TLC) as per conventional one dimensional ascending method using silica gel 60F254, 7X6 cm (Merck) were cut with ordinary household scissors. Plate markings were made with soft pencil. Micropipette was used to spot the sample for TLC applied sample volume 10-microliter by using pipette at distance of 1 cm at 5 tracks. In the twin trough chamber with different solvent system Ethyl acetate: Methanol: Water (100:13.5:10). After the run plates are dried and were observed using visible light Short-wave UV light 254nm and light long-wave UV light 365 nm.

Fig 1: Sample Spotting

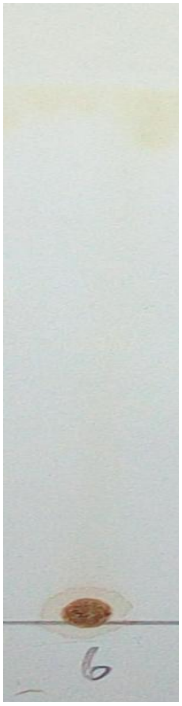

Fig 2: Visible

Fig 3: Long UV

Fig 4:

High Performance Thin Layer Chromatography Analysis

HPTLC method is a modern sophisticated and automated separation technique derived from TLC. Pre-coated HPTLC graded plates and autosampler was used to achieve precision, sensitive, significant separation both qualitatively and quantitatively. High performance thin layer chromatography (HPTLC) is a valuable quality assessment tool for the evaluation of botanical materials efficiently and cost effectively. HPTLC method offers high degree of selectivity, sensitivity and rapidity combined with single-step sample preparation. In addition, it is a reliable method for the quantitation of nanograms level of samples. Thus this method can be conveniently adopted for routine quality control analysis. It provides chromatographic fingerprint of phytochemicals which is suitable for confirming the identity and purity of medicinal plant raw materials.

Chromatogram Development

It was carried out in CAMAG Twin Trough chambers. Sample elution was carried out according to the adsorption capability of the component to be analyzed. After elution, plates were taken out of the chamber and dried.

Scanning

Plates were scanned under UV at 366 nm. The data obtained from scanning were brought into integration through CAMAG software. Chromatographic fingerprint was developed for the detection of phyto constituents present in each extract and Rf values were tabulated.

.HPTLC Chromatographic condition

Sample : OK

Derivatization Solvent: Anisaldehyde

Stationary phase : Silica gel GF254

Mobile phase : Chloroform: n-butanol: methanol: water: Acetic acid (4:1:1:0.5:0.5)

Scanning wavelength : 366 nm

Sample concentration : 10 mg/ml

Applied volume : 5 µl

Application mode : CAMAG HPTLC

TLC Histogram

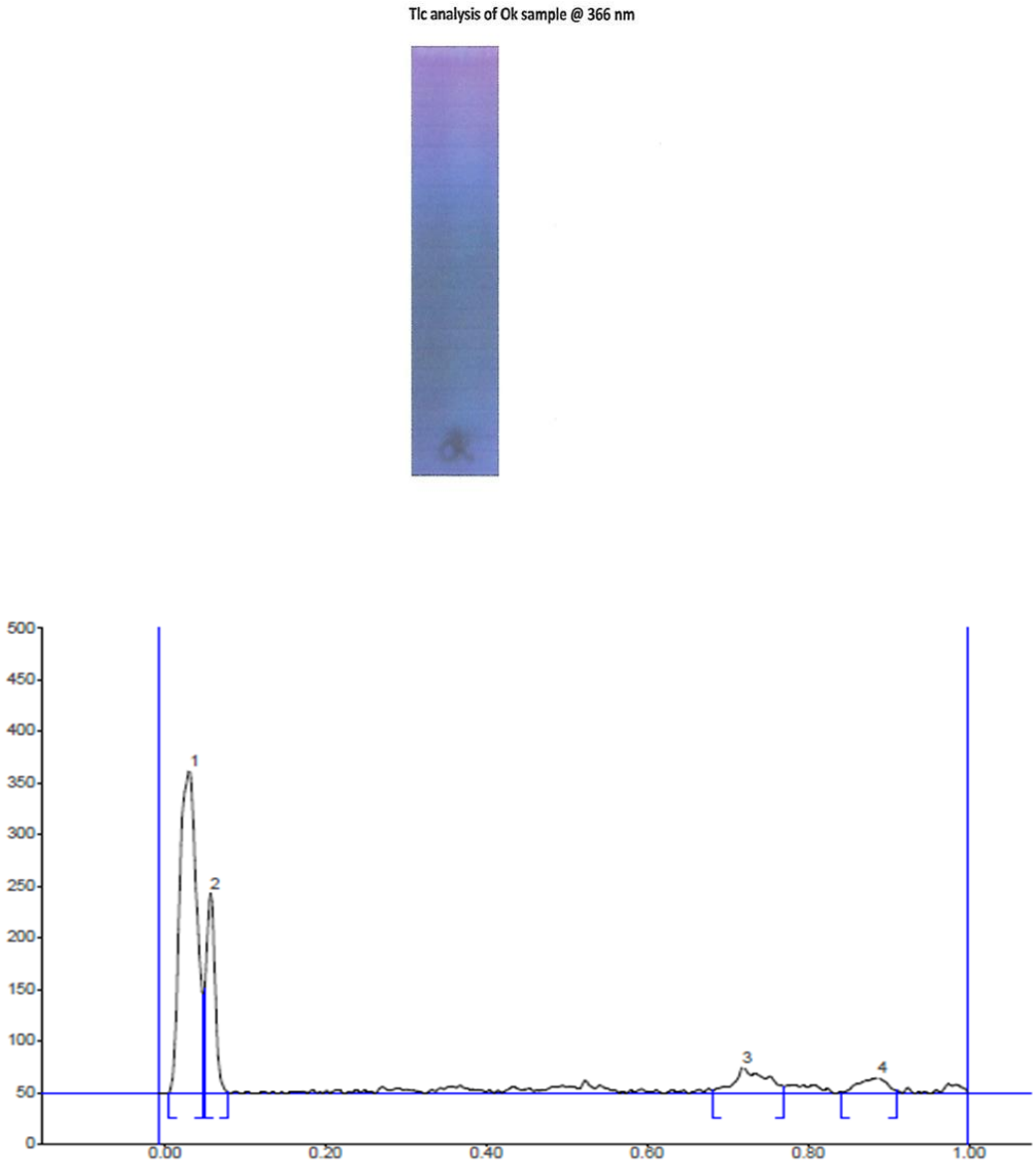

Fig 5: HPTLC CHROMATOGRAM OF OK

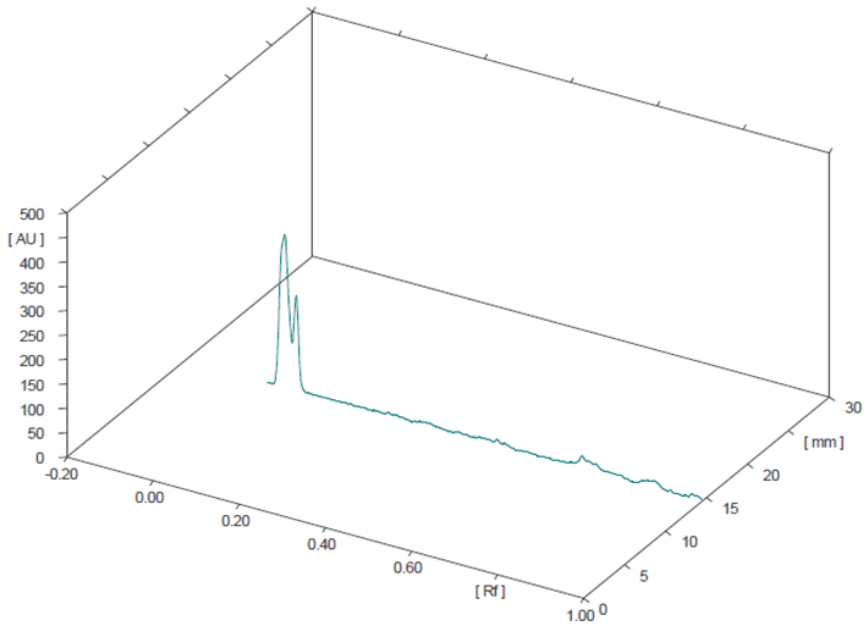

Fig 6:

Table 1: Peak Table of HPTLC fingerprinting of OK

Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %
1	0.00	0.1	0.03	312.5	57.22	0.05	94.3	4987.0	64.64
2	0.05	101.8	0.06	193.6	35.44	0.08	0.5	1634.4	21.18
3	0.68	2.9	0.72	25.0	4.58	0.77	6.3	712.1	9.23
4	0.84	0.4	0.89	15.1	2.76	0.91	2.4	381.5	4.94

REFERENCES

1. Wagner H. Plant Drug Analysis. A Thin Layer Chromatography Atlas. 2nd Ed. Heidelberg: Springer-Verlag Belgium; 2002:305, 227.
2. Siddha pediatric book –balavagadam, page no 67
3. Lukasz Komsta, Monika Waksmundzka-Hajnos, Joseph Sherma. Thin Layer Chromatography in Drug Analysis. CRC Press, Taylor and Francis.