

Short Communication

FTIR Characterization - Functional Groups Identification- of Siddha Drug Pungam Poo Chooranam

D.S. Vaniswari^{*1}, Arunachalam K²

^{*1} Post Graduate, Department of Kuzhanthai Maruthuvam, Tamil Nadu.

²Research Associate (Siddha), Siddha Clinical Research Unit, Tirupati, Andhra Pradesh, India.

Corresponding Author: D.S. Vaniswari

ABSTRACT

Aim: To study the functional groups identification through FTIR characterization of Siddha drug Pungam poochooranam

Materials and methods: The sample in chooranam form were grounded to fine powder form using agate motor and pestle .They were then Pelletized by applying pressure to prepare the specimen to record the FT-IR Spectra and used to determine the presence of the functional groups and bands in the “Pungam poo chooranam”

Result: Alkane, Mercaptans, Amines, Chloride, Bromide, Iodide, Nitro groups were some functional groups such as identified in Siddha formulation “Pungam poo chooranam”.

Conclusion: This identified functional groups will help to evaluate the molecular structure regarding research findings for this Siddha formulation in future for its extensive use in research of new anti cancer drug discovery.

KEYWORDS: Siddha, Pungam poo, FTIR characterization, Chooranam.

INTRODUCTION

The siddhar's who have propounded the siddha system of medicine have recorded the medical wisdom in enigmatic and epigrammatic form in order to make them reach in the hands of deserving and worthy people. Their works are time honoured testimonials for their greater acumen and the wisdom.

Pungam poo chooranam was subjected into FTIR Characterization to create fingerprints for standardization of the siddha drug in the Maanuda maruthuvum(Rational method).

EXPERIMENTAL SECTION

DETAILS REGARDING THE SAMPLE:

“Pungam poo chooranam” is a siddha formulation which indicated as a drug in

siddha text Bhogar vaithiyam-700(page. no 38,song 99-100) for the treatment of chronic disorders. The ingredients of “ Pungam poo chooranam” are pungam poo and pasu neii in equal ratio prepared as per siddha textual description.

DETAILS REGARDING THE FT-IR ANALYSIS

The sample in chooranam form were grounded to fine powder form using agate motor and pestle .They were then Pelletized by applying pressure to prepare the specimen to record the FT-IR Spectra and used to determine the presence of the functional groups and bands in the “Pungam poo chooranam” .

RESULTS

Table[1] FTIR interpretation of “Pungam poo chooranam”

Wave number(cm-1)	Vibrational modes of “Pungampoo chooranam” in IR region	Functional group
2931.80	C-H (Stretch)	Alkane
2349.30	S-H	Mercaptans
2308.79	S-H	Mercaptans
1637.56	N-H (Bend)	Amines
1415.75	N=O	Nitro(R-NO ₂)
1319.31	C-N	Amines
1246.02	C-N	Amines
1157.29	C-N	Amines
767.67	C-X	Chloride
532.35	C-X	Bromide, Iodide

DISCUSSION

The presence of Alkane, Mercaptans, Amines, Chloride, Bromide, Iodide, Nitro groups functional groups were identified in the siddha formulation “Pungam poo chooranam” through FTIR spectrum analysis. The compounds were confirmed through the frequencies observed at the above mentioned wave number.

CONCLUSION

These observed data from this FTIR characterization helps to standardize this siddha formulation “Pungam poo chooranam” regarding its functional behaviour. Alkane, Mercaptans, Amines, Chloride, Bromide, Iodide compounds in this formulation will helps to treat human diseases especially chronic diseases like thyroid,cancer. This identification will become a platform for further research in future regarding the therapeutic uses like anti-cancer activity of this siddha formulation “Pungam poo chooranam”.

ACKNOWLEDGEMENT

The authors wish to thank Kalasalingam academy of Research and Education,

International Research Centre, India for their full support to complete this study.

Conflict Of Interest

The authors declared no conflict of interest

REFERENCES

- Kuppusamy muthaliar K.N, Utamarayan K.S., Siddha Vaithiya thirratu published by Department of Indian Medicine and Homeopathy, Chennai, First edition 1998 ,Page.no:230 .
- The Siddha Formulary of India,part-II, Bhogar vaithiyam-700(page.no 38,song 99-100) ,published by published by Government of India, Ministry of Health and Family welfare,2011,1(1):31
- Rajamaheswari K and Rajasekaran M, Analysis and characterization of the Traditional Siddha formulation Sangu parpam through Fourier Transform Infrs – Red Spectroscopy,Journal of Chemical and Pharmaceutical Research,2016,8(6):309-311.
- Konturek SJ,Brzozowski T,Garlicki J,Majka J, Stachura J, Nauert C, Intragastric PH in the aluminium-containing antacids. Digestion,1991;49(3):140-50.

How to cite this article: D.S. Vaniswari. D.S, Arunachalam K. FTIR characterization - functional groups identification- of siddha drug pungam poo chooranam. International Journal of Research and Review. 2019; 6(5):333-334.
