

Research Article

**STANDARDIZATION OF “VEDI ANNABETHI CHENDURAM” THROUGH
FOURIER TRANSFORM INFRA – RED SPECTROSCOPY**

Sundari S*¹, Thiruthani M*².

¹PG Scholar Department of Nanju Noolum Maruthuva Neethi Noolum (Siddha Toxicology)
Govt. Siddha Medical College, Palayamkottai, Tamilnadu, India.

²HOD Department of Nanju Noolum Maruthuva Neethi Noolum (Siddha Toxicology),
Govt. Siddha Medical College Palayamkottai, Tamilnadu, India.

Corresponding author: **Dr. S. Sundari**, PG Scholar Department of Nanju Noolum Maruthuva Neethi
Noolum (Siddha Toxicology) Govt. Siddha Medical College, Palayamkottai, Tamilnadu, India.

E-mail: 22mardrsundari@gmail.com

Abstract

Metals Plays a Vital Role for the Treatment of many diseases in humans. Scientific Validation and Characterization of the metal formulations are essential for gaining the entire knowledge regarding the medicinal principles of concern formulations and their proper use to cure diseases. FTIR Characterization was carried out for the Siddha metallic formulation, ” Vedi Annabethi Chenduram “ to identify it’s functional groups such as Amines, Alcohols, Alkanes , Alkyl, Carboxylic acids, Alkenes, Ketones, Alkylhalides, Ethers, Phosphines, Aromatic were identified in the metallic Siddha Drug ,”Vedi Annabethi Chenduram”. This identified functional groups will help to evaluate the molecular structure regarding research findings for this metallic formulation “Vedi Annabethi Cheduram” in future for it’s extensive use.

Keywords: FTIR, Vedi Annabethi Chenduram, Siddha formulation

Introduction

Siddha system is one of the oldest conventional medical system in the world. Siddha system not only help to treat the human diseases and also helps to attains soul satisfaction. In Siddha system of medicine of diagnostic methodology is based on three humours namely Vadham, Pitham, and Kapam. Metals plays a Vital role in Siddha medicinal Preparation. Vedi Annabethi Chenduram is a metallic Preparation cited in Gunapadam ThathuJeevam prepared through the

special oxidation procedure involving purified form of minerals processed under herbal juice.

Experimental Section

Details regarding the sample:

Vedi Annabethi chenduram is a metal formulation which indicated as a drug in Siddha sastric text “Gunapadam Thathu Jeevam” for the treatment of

Anaemia, Jaundice, Dropsy, Ascites etc., The ingredients of Vedi Annabethi Chenduram are two in number. They are Iron sulphate and Pottasium nitrate. The drug was prepared as per the text.

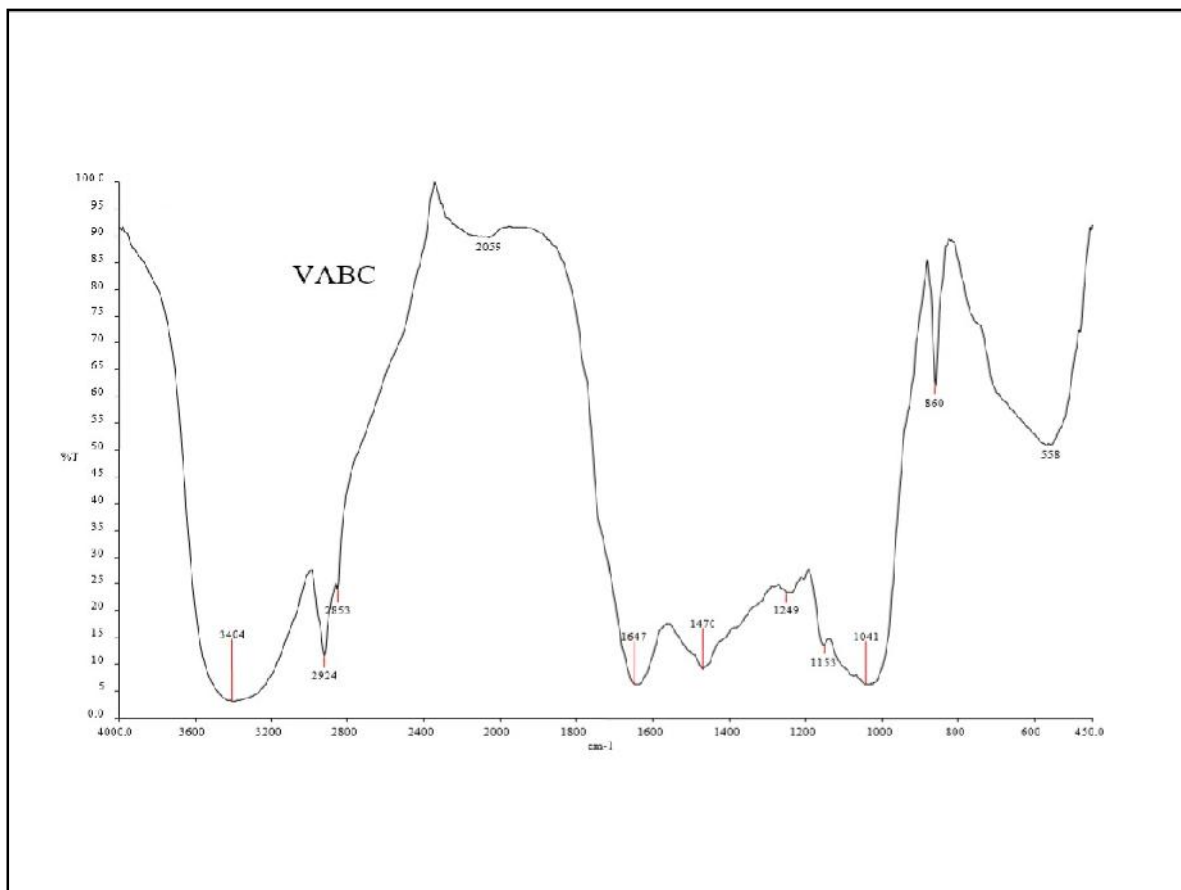
Details regarding the FT-IR analysis:

FT-IR spectra were recorded at SAIF, IIT Madras, India. The Perkin Elmer Spectrum one Fourier Transform Infrared (FTIR) Spectrometer was used to derive the FT IR Spectra of Vedi Annabethi Chenduram in potassium Bromide (KBr) matrix with scan rate of 5 scan per minute at the resolution 4cm^{-1} in the wave Number region $450\text{-}4000\text{cm}^{-1}$. The samples were grounded to fine powder using agate motor and pestle and mixed with KBr. They were then pelletized by applying pressure to prepare the specimen (the size of specimen about 13 mm diameter and 0.3 mm in thickness) to recorded the FT-IR spectra under standard conditions⁴. FT-IR Spectra were used to determine the presence of the functional groups and bands in the Vedi

Annabethi Chenduram. The recorded spectrum shows in figure 2.

Results

FT-IR Analysis is utilized to find out the organic nature of sample as well as metal oxygen stretching frequencies. In the FTIR spectra analysis, the Vedi Annabethi Chenduram sample exhibit the peak value shoes in table 1 at the wave number of 3404,2924,2853,2059,1647,1470,1249, 1249.1153,1043,860,558 having N-H Stretch (1 per N-H bond), O-H stretch, C-H stretch, O-H stretch, C=C stretch, C=O stretch, C-O stretch, C-C stretch, C-O stretch, C-F stretch, C-O-C stretch, PH bend, C-H bending, C-Cl stretch, C-Br stretch, C-I stretch. This indicates the presence of some organic functional groups such as Amines, Amides, Alcohols, Alkanes, Alkyl, Corboxylic acids, Alkenes, Ketones, Alkyl halides, Ethers, Phosphines, Aromatic, were identified in this medicine "Vedi Annabethi Chenduram" through FTIR Analysis.



Wave number (cm-1)	Vibrational modes of VABC in IR region	Functional groups
3404	N-H STRETCH(1 per N-H bond) N-H STRETCH O-H STRETCH	AMINES AMIDES ALCOHOL
2924	O-H STRETCH C-H STRETCH	CARBOXYLIC ACID ALKANES
2853	C-H STRETCH C-H STRETCH	ALKYL GROUP ALKANES
2059	C-H STRETCH	ALKANES
1647	C=C STRETCH (Isolated) C=O STRETCH	ALKENES AMIDES
1470	N-H BEND	AMIDES
1249	C-O-C STRETCH (Dialkyl)	ETHERS
1153	C-F STRETCH	ALKYL HALIDES
1041	C-O-C STRETCH (Dialkyl) PH BEND	ETHERS PHOSPHINES
860	C-H bend (Para)	AROMATICS
558	C-Cl STRETCH C-Br STRETCH C- Cl STRETCH	ALKYL HALIDES ACID CHLORIDES

Discussion

FT-IR Analysis is utilized to find out the organic nature of sample as well as metal oxygen stretching frequencies. The presence of some organic functional groups such as Amines, Amides, Alcohols, Alkanes, Alkyl, Corboxylic acids, Alkenes, Ketones, Alkyl halides, Ethers , Phosphines, Aromatic, were identified in this medicine “ Vedi Annabethi Chenduram” through FTIR Analysis.

Conclusion

These observed data from FTIR characterization helps to standardize the siddha compound drug “Vedi Annabethi Chenduram” regarding it's functional behavior. The presence of functional group Alcohol indicates to increase High Density Lipo protein which is protective for Atherosclerosis.

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