

The Identification of Elements in Medical Herbs by Different Techniques

Dr. I.K.Rao¹

¹Rt. Lecturer, Government Degree College for Women, Srikakulam, A.P. India, (affiliated to Andhra University, Visakhapatnam-3).

¹raoik25@gmail.com

Abstract- The important medical herbs like,

1. Ocimum Villosum
2. Hydrocotyle asisatica henaestis
3. Fumaris officinalls
4. Piper Betal
5. Aloe Indica
6. Chyrenthens Triand

are investigated by Nutron Activation Analysis (NAA) EDAX and EDXRF and XRF. The elements in them are presented in the tabular columns given below.

I.INTRODUCTION

India is a Country, well known to its ancient medical techniques (aurvadic medical technology) and having a huge medical plants available yet to investigate to cure various diseases.

The elements presented in these medical herbs highly essential to know before its use in medicine.

II.EXPERIMENTAL

The collected medical herbs prepared by nano particles and used in various techniques like NAA, EDAX, EDXRF and XRF. The details of the experiment are not mentioned because of availability in literature.

III.RESULTS AND DISCUSSIONS

1. Ocimum Villosum (Sacred Basi): Known as *Tulasi* the pious name and investigated by NAA as in the tabular column:

Element	Concentration (mg/kg)
Na*	1.7 +/- 0.1
K*	32.0 +/- 1.6
Cl*	19.3 +/- 0.5
Mn	44.8 +/- 0.7
Cr	3.0 +/- 0.3
Br	41.2 +/- 2.1
As	13.3 +/- 0.9

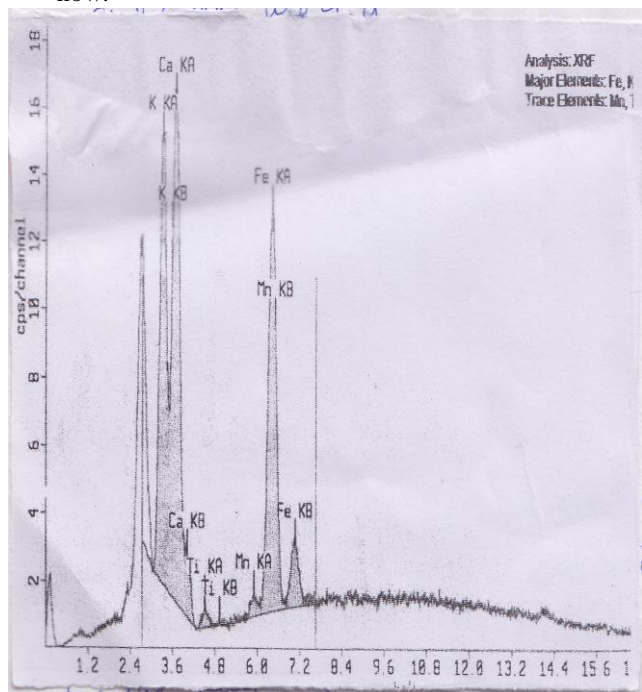
(* indicates mg/g)

2. Hydrocotyle assisatica Herpestis: It is known as *Saraswati Leaf* and measured by NAA and tabulated is below. It is used as memory powder and controlled hesistera.

S.No.	Element (ug/g)	Concentration as + 1tis <(n=3)
1	Cr	2.52 ± 0.23
2	Cc	0.30 ± 0.03
3	Fe	4.39 ± 4.9
4	K	4.32 ± 0.46
5	Mn	291 ± 44
6	Na	191 ± 24
7	Zn	132 ± 2
8	Sb	0.22 ± 0.007
9	Rb	34.4 ± 0.9
10	Th	0.070 ± 0.017

3. Fumaris officinalls (Gommon Fanitory): From ancient days onwards people use it with dal (pulses) in their

food items. The golden particles investigated to control the cancer in human beings. Without knowing its advantage, the villagers make use of it in their food till now.

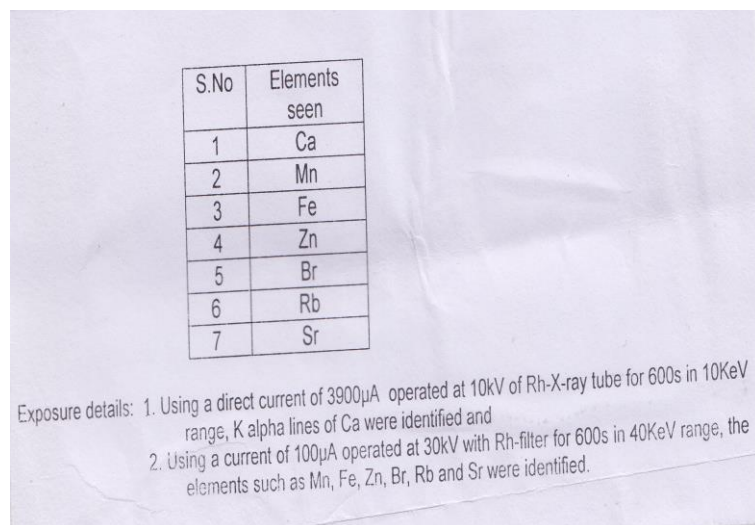


4. Piper Betal: It is used from ancient days the royal families of kingdom and nawabs as a digestive leaves and other health cures for stomach upsets/1/.

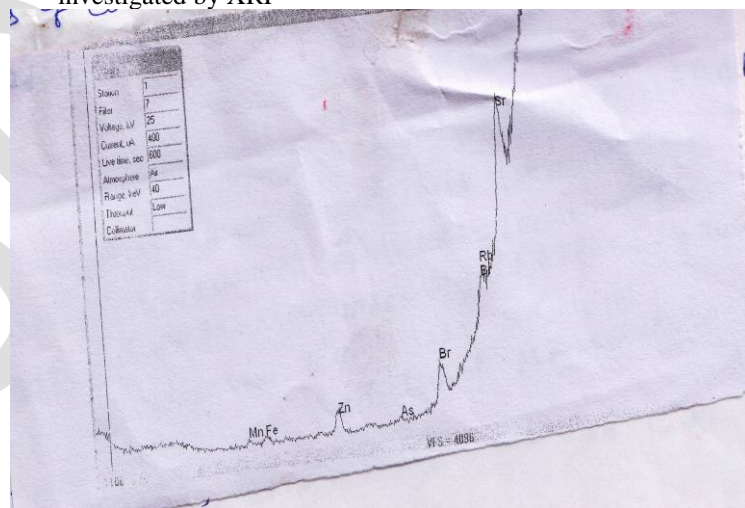
S.No.	Element	Concentration ($\mu\text{g g}^{-1}$)
1	Al	93
2	Co	ND (<1.7)
3	Cr	ND (<4)
4	Cu	40
5	Fe	200
6	Mn	60
7	Ni	ND (<7)
8	Zn	34
9	Bi	ND (<0.5)
10	Cd	ND (<1)
11	Pb	ND (<2)
12	As (Non Volatile)	ND (<5)

ND: Not detected; Method precision 5%

5. Aloe Indica: It is mainly used after boiling with water for many diseases mostly occurred in children. It is investigated by EDXRF.



6. Achyranthes Triand: It is good for health and prepared for the purpose of curries of different types and investigated by XRF



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