



Qualitative Phytochemical analysis of Siddha herbal preparation Perumpeelaiver Kudineer

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Abstract

The aim of the present study was to find out the presence of phytochemicals in the alcoholic extracts of *Aerva javanica* by qualitative screening methods. The various test are used for the analysis of phytochemicals as described by Harborne & Onwukaeme & Coworkers, 1999 were carried on alcoholic extract of plant. The medicinal value of perumpeelaiver kudineer lies in some chemical active substances that produce a definite physiological action. In qualitative analysis, the phytochemical compounds such as Antraquinones, Flavonoids, Phenols, Sapanoids, Tannins, Terpenoids and Quinones were screened in alcoholic extracts by using standard methods.

Keywords: Phytochemical, Perumpeelai ver kudineer, *Aerva javanica*

I. Introduction

Aerva javanica belongs to Amaranthaceae family. It is a perennial shrub. The stem is terete, much branched. The leaves are simple, alternate, variable, 2.5-6.3cm, shape-liner-oblong or oblong-spathulate, margin-entire, densely tomentose pale white. Flowers are unisexual, dense, usually dioecious, dull white, sessile⁽⁵⁾. This herb is deep rooted woody based and is used as soil binder. Alkaloids, Steroids, triterpenes, Lipids, Flavonoids, Tannins and Glycosides are the main

constituents of various part of *Aerva javanica*^(3,4). Chrysoeriol, Isorhamnetin 3-O-rutinoside, Kaempferol-3-robinoside, Campesterol, amyirin, fatty acid and a series of hydrocarbons ranging from C13-C30 were isolated from this plant⁽¹⁾. *Aerva javanica* is reported for anti-diarroheal, anti-oxidant, Analgesic, anti-hyperglycemic activities. Root of *Aerva javanica* are used against rheumatism, toothache and kidney disorders. Roots extract is used for the treatment of eye diseases and headache. Roots mixed with mustard oil are used for skin diseases ailment⁽⁶⁾.

II. Materials and Methods



Perumpeelai ver kudineer chooranam

2.1 Collection of materials: The fresh parts of Perumpeelai ver, *Aerva javanica* were collected from Tirunelveli, Tamilnadu. The plant material were identified and authenticated by the Medicinal botanist and Gunapadam experts at Govt. Siddha Medical College, Palayamkottai.

2.2 Purification and preparation of Perumpeelai ver Kudineer: All the ingredients of herbal formulation were purified according to the methods in Siddha classical literature (C.Kannusamipillai, 2007). All the adulterants from the raw drugs were removed, cleaned and dried in shade. The purified drugs are coarsely powdered and taken as Kudineer chooranam (S.Chithamparathanupillai, 1992)⁽²⁾ and stored in air tight container.

III. Qualitative Phytochemical analysis of Perumpeelai ver Kudineer:

Preliminary test on Siddha preparation PKC is carried out for the presence of Antraquinones, Flavonoids, Phenols, Sapanoids, Tannins, Terpenoids and Quinones etc.

The methods adopted for the estimation are as follows.

3.1 Test for Antraquinones:

To 2ml of the root extract is shaken with 10ml of benzene and filtered. 5ml of 10% ammonia is added to the filtrate. The mixture is shaken and

the presence of pink, red or violet colour indicates the presence of antraquinone.

3.2 Test for Flavonoids: Shinoda's test (Harborne,1984)

Perumpeelai ver Kudineer is treated with alcohol, to that a piece of Magnesium is added followed by an addition of conc. HCl drop wise and heated. Absence of Magenta colour formation.

3.3 Test for Saponins: Frothing Test (Kokate, 1999)

Perumpeelai ver Kudineer was diluted separately with 20ml of distilled water and it was agitated on a graduated cylinder for 15min. Appearance of the foam formation.

3.4 Test for Phenol: Ferric chloride test (Mace, 1963)

To 2ml of alcoholic extract of Perumpeelai ver Kudineer, 2ml of distilled water followed by drops of 10% aqueous solution of FeCl₃ solution were added. Absence of blue or green colour formation.

3.5 Test for Tannins: Ferric chloride test

To 2ml of aqueous extract, few drops of 5% ferric chloride solution were added. A bluish black color which disappears in addition of few ml of sulphuric acid, there is no formation of yellowish brown precipitate.

3.6 Test for terpenoids:

To 2ml of chloroform extract, 1ml of conc.H₂SO₄ was added carefully along the sides of the test tube. Red colour was produced in chloroform layer.

3.7 Test for Quinones:

To 2ml of the root extract was treated with 5ml of HCL. Appearance of yellow colour precipitate.

IV. Results and Discussion

Qualitative Phytochemical analysis of Perumpeelai ver Kudineer

The qualitative Phytochemical analysis revealed the presence of Antraquinones, Phenols, Tannins, Terpenoids, Quinones which is showed in Table 1.

Table.1: Qualitative Phytochemical analysis of Perumpeelai ver Kudineer

Test	Observation	Inference
Sample code: Perumpeelai ver Kudineer		
1. Antraquinones	Appearance of violet colour formation	Presence of Antraquinones (+ ++)
2. Flavanoids	No characteristic change was observed	Absence of Flavonoids (-)
3. Phenols	No characteristic change was observed	Absence of Phenols(-)
4. Saponins	Appearance of foam formation	Presence of Saponins (++++)
5. Tannins	No characteristic change was observed	Absence of Tannins(-)
6. Terpenoids	A red colour was produced in the chloroform layer.	Presence of Terpenoids (+ ++)
7. Quinones	Appearance of yellow colour precipitate	Presence of Quinones (+ ++)

V. Conclusion

The Qualitative chemical analysis of Siddha herbal formulation Perumpeelai ver Kudineer are embedded in variety of secondary metabolites such as Antraquinones, Saponins, Terpenoids, Quinones. Mode of action is based upon efficacy of various plant molecules. More of these compounds should be subjected to animal and human studies to determine their effectiveness in mankind.

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