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"TO CLEAR THE METRIX AND IMPROVE THE PRODUCTION QUANTITY (YIELD) OF THE HERBAL EXCTRCT OF *AMLAKI* AND *HARIDRA* BY USING SNYDER TRIANGLE SOLVENT SYSTEM FOR CHARMATOGRAPHY"

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ABSTRACT
AMLAKI AND HARIDRA are the most wonderful herbs present in our classical literature in ayurvedic textbooks. *Haridra* is perennial herbs and it consist the dried as well as rhizomes and its Latin name is *Curcuma longa* belonging to the family *Zingeberaceae. Amla* is the medium sized deciduous plant which grows height of 8-18m and have a small leaves and spreading baranches. the Latin name is *Phyllanthus emblica* belonging to family *Phyllanthaceae*. Pharmacologically there is large experiments were performed and the results are amazing. They are acting on alzimer disease, antitumers. Amlaki shows antioxidant properties because of vitamin-c. Haridra have anti-inflammatory activity. *Haridra* have chemical constituents volatile oil, resin, starch grain. It contains yellow colour curcuminiods called as curcumin. which is used in large number of various diseases. *Amla* is a rich source of vitamin and it is diuretic, laxative and leucorrhoea and discharge from uterus. It is also used in the shampoos, oils because it is very useful in hair growth. It is also used in food as preservative or enhancing of food taste like sauces, candy, dried chips, and jellies. The fruit is also present querctin, phyllaemblic compounds, gallic acid, tannin, flavanoids, pectin and vitamin and polyphenol compounds. Terpenoids, alkaloids useful in Biological activity. In present study the extractions are done in both plants in different chemicals and enhance the yield of plant exctract. The solvent strength is same in all the combination of two chemical. The experiment is based on synder triangle of solvent system highly informatics used in chromatography these day.

KEYWORDS: Anti-inflammatory, vitamin-c, curcumin, pharmacologically, antioxidant, phyllaemblic compounds.

INTRODUCTION
Herbal extraction plant has a vast scope in India. Extracting of *Haridra and Amlaki* is an important herbal. Amalki is widely used in the scented soaps, sprays, deodorants, polishes, medicines etc. The extracted powder is rich in VitaminC.[1] Amlaki contain iron, magnesium, silca, B12, VitaminC, VitaminK. Fruit is rich in pectin and phyllembin.it also contain tannins, resins, phyllembic lipids, gallic acid, mucic acid and glucose. Seeds contains fixed oil, essential oil with linolenic, stearic, palmaitics. In Haridra yellow colour curcuminiod are present called as curcumin.which are easily isolated and The active ingredient of Haridra effectively inhibits allergic symptoms such as airway constriction.[2,3] *Haridra* show antifungal activity in turmeric oil.[4] In present research paper is based on the Snyder triangle solvent triangle given in chromatography it is done to improve the quality and quantity of the herbal extracts. The mixing of two solutions takes a similar course. Both lose their individual structure in favour of a statistically determined partition of one solvent in the other. A new mixture will not be formed if the dissipation energy is insufficient for an integration process. Water and n-hexane for example are immiscible because the forces between hexane molecules are much greater than the forces between hexane and water molecules. Mixing in this case will result in two immiscible phases. The general rule is that "like dissolves like". We distinguish between "hydrophilic" and "hydrophobic" solvents, depending on their ability to mix with water, with hydrophilic solvents selectively forming solutions with hydrophilic compounds and vice versa. Next Snyder defined a polarity index as the standard measure for the capacity of a solvent to interact with various liquids such as n-octane, ethanol, dioxane, methyl ethyl ketone, or nitro methane. To take proton acceptor, proton donor, and dipole properties into account, Snyder used the partition coefficients of the liquid dissolved in ethanol (proton donor), dioxane (proton acceptor), and nitro methane (dipole character). The n-octane data served as the reference value. He rejected the partition coefficients of the liquids with

methyl ethyl ketone because they correlated with the ethanol data.[5,18]

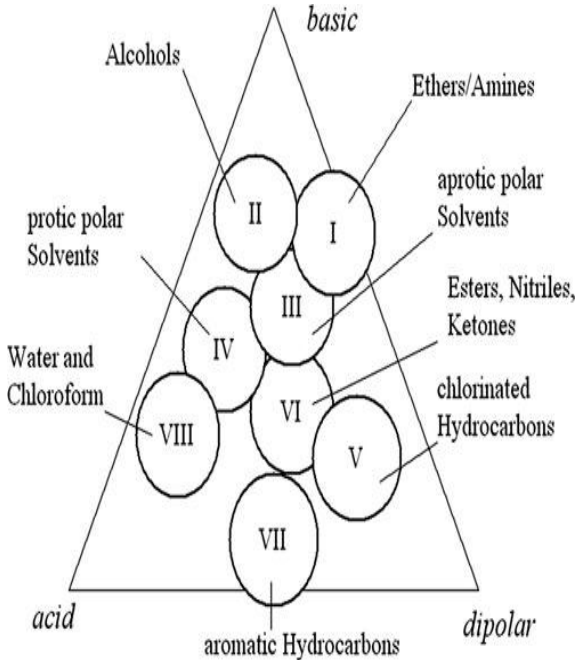

Fig. 1: Classification of solvents in various selectivity groups (according to Snyder).

On this basis the solvent are taken from synder triangle. The statement "like dissolves like" is also true for acids and bases. Acids should be separated with acidic solvents such as acetic acid, formic acid, or solvents containing dilute hydrochloric acid. Bases are best separated by adding modifiers containing a basic functional group or diluted ammonia to the mobile phase. Often the relevant literature contains important hints on how to identify the best solvent system for a particular sample drugs.[19,20]

Materials

The drugs collected from the Pharmacy of Gujarat Ayurved University, Jamnagar, India. The authentification done in Pharmacognostic laboratory, Gujarat Ayurved University, Jamnagar, India with authentification number 6251 and 6252.

Methods

1. Drugs are crused in course powder with help of mixie.
2. Weighed accurately 100gm of drugs in butter paper.
3. Take six conical flasks and put the weighed drugs sample in it.
4. Then pour the chemicals solvents by using Graduated Cylinders in it as per calculation.
5. Cover it and kept it for 24 hour and shake it gently when the solvent added for it.
6. After 24 hour filter it with help of cotton and simple filter paper.
7. Then take glass evaporated disks weighed it and kept the filtrated solvent in it. Heat it until all solvent are evaporated.
8. Kept this dry evaporated in oven in 15 min then cooled it and weighed it for calculation of yield.

OBSERVATION

S.No	Combination of solvent	Empty Weight E.D(mg)	Final weight E.D(mg)
1.	Methanol: water(*Haridra*)	68655	74868
2.	Methanol: Acetone(*Haridra*)	155306	159539
3.	1-propanol:Toulene(*Haridra*)	64239	66570
4.	Diethyl ether:Toulene(*Haridra*)	56626	58568
5.	Methanol: water(*Amlaki*)	63140	74850
6	Methanol: Acetone(*Amlaki*)	58768	87815
7.	1-propanol:Toulene(*Amlaki*)	68243	68663
8.	Diethyl ether:Toulene(*Amlaki*)	63439	67354

Table 2: Colour observation regarding Experiment.

S.No	Combination of solvent	Colour
1.	Methanol: water(*Haridra*)	orange
2.	Methanol: Acetone(*Haridra*)	red
3.	1-propanol:Toulene(*Haridra*)	red
4.	Diethyl ether:Toulene(*Haridra*)	orange
5.	Methanol: water(*Amlaki*)	yellow
6	Methanol: Acetone(*Amlaki*)	black
7.	1-propanol:Toulene(*Amlaki*)	yellow
8.	Diethyl ether:Toulene(*Amlaki*)	orange

RESULTS

Therefore, As Per Formula

Extraction yield (%) = (weight of the freeze-dried extract x 100) / (weight of the original sample).[21]

S.No	Combination of solvent	Extraction yield (%)
1.	Methanol: water(*Haridra*)	6.21
2.	Methanol: Acetone(*Haridra*)	4.23
3.	1-propanol:Toulene(*Haridra*)	2.33
4.	Diethyl ether:Toulene(*Haridra*)	1.94
5.	Methanol: water(*Amlaki*)	11.71
6	Methanol: Acetone(*Amlaki*)	29.00
7.	1-propanol:Toulene(*Amlaki*)	0.42
8.	Diethyl ether:Toulene(*Amlaki*)	3.91

Therefore the maximum Extraction yield in *Haridra* (%) Methanol: water is 6.21 and in *amlaki* Methanol: Acetone is 29.00. which show that organic solvent is better choice for the maximum yield.

DISCUSSION

As we know that the Exctract rich medicine are more potent then the raw drugs. The beneficial point is that it has decrease the dosage and enhances the potency of the drugs. It is highly used in property medicines. There are large demands in industries for these extracts these days. they are costly and the yield is also less. so to enhance the yield there is still lot of experiments should perform. The isolation techniques are also less and the instruments are costly. So to reduce these factors there is vast scope in this field.

CONCLUSIONS

In this research I have found that *haridra* and *amlaki* extracts have a good yield in compositions of two chemical methanol and acetone. It will enhance the yield of both drugs extracts. It will increase the therapeutic potency of the drugs extract and mostly all of phytochemicals are come under in the drugs exctraction. it will also decrease the cost factor of isolations and the isolated extract have also good purity percentage.

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