



EFFECTIVENESS OF COHOBATION PROCESS IN ELECTROHOMOEOPATHY SYSTEM OF MEDICINE

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ABSTRACT

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Medicinal herbs plants were discovered and used in traditional medicine practices since ancient times. Plants medicines were the best and effective option for the treatment and prevention of diseases in human and animal since prehistoric time. The major source of drug development in all the system of medicine like allopathy, Ayurveda, Unani, Homeopathy and Siddha are plants. The Electrohomoeopathy system of medicine which worked on purification of blood and lymph is totally depending on the selective plants. Since the thousands of years our civilization invented, discovered, implemented and practicing several system of medicine all of them having the unique source that is gift of the nature called plants. So now question is if every pathy having plants as a unique secures then why they are called different pathy. So in this article we are going to discuss the major different in each pathy via there extraction process even they having the common unique source.

INTRODUCTION

Plants extraction process involves the separation of medicinally active ingredient from plants cell so inactive or inert components can be separated by using selective solvents in standard extraction procedures. The products so obtained from plants extraction are relatively impure liquids, semisolids or powders which further get purify and can be used internally or externally. The classes of preparations commonly known as infusions, Spagyric essence, tinctures, decoctions, fluid extracts, pilular for semi semisolid extracts like paste, jelly and powdered extracts. Such preparations commonly known as galenicals, named after Galen, the second century Greek physician. The main aim of standardized extraction

procedures for natural drugs with the help of selective solvent to attain the desired therapeutically portion and convert them in to potent form so desire therapeutic benefit can be archived. The selective solvent which used in extraction process known as menstruum. Each pathy having there welldefined extraction process. While inventor of Electrohomoeopathy Dr. Count Matties used extraction process is known as Cohobation which is very much effective these days for the preparation Spagyric essence. Cohobation process was used in alchemy and pre-modern chemistry this process involved repeated distillation of the same matter of crude plants with the help of aqueous solvent, the liquid drawn from it that aqueous solvent being

poured again and again upon the matter left at the bottom of the vessel. [1] Cohobation is a kind of circulation, only differing from it in this, that the liquid is drawn off in Cohobation process is a common distillation, and thrown back again whereas in circulation, it rises and falls in the same vessel, without ever being drawn out. [2][3] So maximum active ingredient from the plants can be separated with help of this process. In modern chemistry people having different opinion about the Cohobation but still this is one of the best effective technique for plants extraction. There are 114 plants used in Electrohomoeopathy system of medicine all are extracted via Cohobation process. [4] Cohobation is the first step in Electrohomoeopathy to separate the desired natural products from the raw materials. Natural products showed more medicine like features to molecules from combinatorial chemistry in terms of active functional groups, structural complexity and chirality. [5] [6]. During the extraction of plants material solvent properties, the size of the raw materials, the solvent-to-solid ratio, extraction duration, extraction temperature and play an effective role [7–11].

In Cohobation process aqueous media used as solvent while duration and extraction temperature is well defined. Common Extraction methods of plants medicine include solvent extraction, steam distillation, Maceration, CO₂ extraction, cold press extraction, enfleurage, water Distillation and sublimation. Solvent extraction widely used method for natural products. [12] The extraction of natural products progresses through the following stages: (1) the solvent penetrates into the solid matrix; (2) the solute dissolves in the solvents; (3) the solute is diffused out of the solid matrix; (4) the extracted solutes are collected. Any factor enhancing the diffusivity and solubility in the above steps will facilitate the extraction. Identification of nature of the plants and selection of the solvent for the natural product is very much important.

Solvent selection also affect the safety, efficacy, potency and importance is the cost factor should be considered. It is important to select the extraction solvent on the law of similarity basis like dissolves like. Solvents

polarity value should be near to the solute polarity for better perform and vice versa. Alcohols are universal solvents used in extraction for phytochemical constituents in the process finer particle size give the better result. Commonly extraction efficiency can be enhanced by reducing the particle size which help penetration of solvents and diffusion of solutes. To fine particle size can lead to excessive absorption of solute in solid and difficulty in subsequent filtration.

Temperature play an important role which help to increased solubility and diffusion high temperatures may lead to solvents loss, decomposition, undesirable impurities and affect thermolabile components. The extraction efficiency can be increases by increasing extraction duration. Increasing time does not affect the extraction when equilibrium of the solute is reached outside and inside in solid material. The greater the solvent-solid ratio is greater the extraction yield while solvent- solid ratio more can lead to excessive extraction solvent and long time for concentration. The conventional extraction methods included reflux extraction, percolation and maceration require a large volume of organic solvents and more extraction time. [13]

Cohobation and relevant method used in Electrohomoeopathy system of medicine for preparation of medicine.

As per Electrohomoeopathy the medicines are prepared by a specific process called the cohobation system invented by Count Cesare Mattei in the 19th century. Spagyric remedies were originally created by fermenting parts of wild herbs. This process produced concentrated aromatic solutions that were extracted and separated from the plant matter. After fermentation, the plant material was distilled, and the remainder dried and burned. The ashes were extracted and purified via distillation and crystallized, then recombined with the concentrated solution. Cohobation or Spagyric essences (extract) are prepared by these plants. Spagyric term derived from Greek word Spagyric (Spao + ageiro) that means separate and reunite.

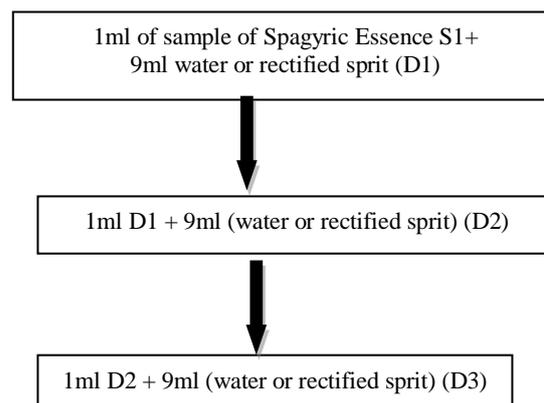
Spagyric essences (extract) prepared by the following process

- 1- In the first step the plant material is immersed in water in a container and warmed at a temperature 30 to 40 degree centigrade, the phytoconstituents can be extracted in the water.
- 2- The process need to repeat by changing required fresh water to yield maximum concentrated essence.
- 3- This process may require 3 to 30 days depending upon plant parts we use for example fresh leaves, stem bark, seeds, roots etc.
- 4- This separated fresh water extract is collected in a separate collecting bottle.
- 5- This extract denoted as A.
- 6- After this water extracts prepared the plant material is distilled in water to separate more phytoconstituents such as volatile oils and oils from the plant materials.
- 7- This extract denoted as B.
- 8- After this second step plant material is taken in a separate wide mouthed round bottom flask the water left from the separation of volatile oils is poured over the plant material in the wide mouthed round bottom flask.
- 9- Seal the flask with fermentation lock and place it in an incubator at 27 degrees centigrade for two weeks. The plant material will have fermented and yielded up its spirit this fermented spirit is also known as Mercury.
- 10- Distilled off the spirit and rectified it for several times.
- 11- This third extract is denoted as C.
- 12- The remained plant material is taken for separation of salts from the plant material in the fourth step. In this step dry the material to remove all moisture in an oven. When the moisture gone the plant material will begin to roast then incinerate it.
- 13- When the material became ash grey colour turn off the heat and let it cool. Grind and weigh the ash and extract it in a Soxhlet extraction in water and collect it in a Petri plate.

- 14- Evaporate water in an oven overnight then collect the salt. Weigh the salt content and heat in high temperature to obtain hygroscopic salts and collect it in air tight bottle.
- 15- This extract is denoted as D. After extraction the remix the extracted salts (that is D) with rectified spirit (i.e. C) and the Volatile oils (B) and then with water extract A allow this mixture to digest at 30-degree centigrade temperature for a week.
- 16- This process is known as Cohabitation.
- 17- Shake the container slightly three to five times per day for a week. This process is known as digestion.
- 18- After digestion decant the Spagyric essence to remove undissolved salts. This essence is used for further medicinal preparation which is higher in quality and almost zero toxic.

PREPARATIONS OF SPAGIRIC DILUTION FOR ELECTROHOMOEOPATHY MEDICINE

By the above mentioned procedure the Spagyric essences of each plant are prepared. Then these individual essences are remixed to prepare complex medicines in different dilutions and different proportions by below process.



ANOTHER PROCESS FOR THE PREPARATION AND CALCULATION OF SPAGIRICAL ESSENCE

The **Glaser's. Theodore Krauss** worked on the process of Cohobation' in Plant Alchemy. He suggested cold distillation process with

fermentation give Spagyric essence which is very much effectivity to archived desire therapeutic benefit. [14]The herbs are collected as per pharmacopoeia, required quantity of its pulp or crushed material or juice is kept in glass jar as per pharmacological table determined by its property of solidity and liquidity, the required proportion of liquid vehicle like aqua distillation is poured in the jar. The required quantity of distilled water is calculated as per below formula.

$$W = \frac{M.T}{100} \times KG$$

M- Weight of the plant mass in KG

T- Drying loss of sample in percent.

Required quantity of ethanol 86% as per the formula.

$$H = 0.1 \times M \times T \text{ (KG)}$$

The jar is made air tight to help fermentation by slow process at 28 to 35 degree Centigrade. That is summer room temperature is enough for slow process of fermentation.

Production: It takes 48 hours or more for completion of fermentation and the process of fermentation comes to a standstill. The preparation will be pressed, and the solution be kept below 20 degrees Centigrade and protected against light. The original tincture contains a mixture of 2 parts pressed out liquid, 1 part percolate and 7 parts ethanol 30%. The original tincture be kept for 5 days, below 20 degrees Centigrade and protected against light. The air-dried pressed out residue will be percolated with ethanol 86% as per the method described in the monography extract of pharmacopoeia. Total quality of ethanol 86% for percolation will be calculated as per the formula.

$$A = \frac{M.T}{100} \times KG$$

M- Weight of the plant mass in KG.

T- Drying loss of sample.

The original tincture contains a mixture of 2 parts pressed out liquid 1-part percolate and 7

parts ethanol The original tincture should be kept for at least 5 days in temperature below 20 degrees Centigrade. After this process, the preparation can be filtered.

SPAGIRICAL ZIMPEL: Many years ago Dr Zimpel developed the Spagyric process in which plants are fermented by means of yeast fermentation. The carbohydrates ferment and are changed into alcohol, during this process certain medicinal properties are released and are also changed. New enzymes develop and these enhance the overall effect in the case of some plants, whereas in others, for example plants containing mucilage, the effect is diminished. This fermentation process, like any other method, has its advantages and disadvantages. In more recent times, Dr Strahtmeier has again started to use the fermentation process, with good results.[15]

To evaluate spagirical Glaser's. Theodore Krauss

Drug manufactured as denotations of the herbs the fresh plant is taken which contains 70% moisture. The plant material will be finely crushed and cooled. The loss of drying will be calculated from a sample. The plant mass is then mixed with aqua distillation, sucrose and yeast in a container.

The required quantity for water will be calculated as the formula

$$W = \frac{M.T}{100} \times KG$$

The required quantity of sucrose (S) as per the formula

$$S = 2M.T \text{ (Kg)}$$

M- Weight of the plant mass in KG.

T- Drying loss of sample in percent.

The required quantity of yeast (H) as formula

$$H = 0.1 \times M \times T \text{ (KG)}$$

The container will be with a fermentation attachment and the preparation shall be left for

fermentation at a temperature of 95 degree Fahrenheit.

Production: As soon as the process of fermentation comes to a standstill, the preparation will be pressed and the solution is kept at temperature below 20 degrees Centigrade. After the process the preparation is filtered. Cohobation of spagirical zimpel makes the spagirical Krauss composed by required number of ingredients to conjugate and be together for at least 48 hours at 20 degrees Centigrade. The conjugation is done as follows. One part of spagirical Zimpel mixture mixed with 9 parts of aqua distilled. Again this one part may have certain number of ingredients to cohobate by required percentage making a homogenous mixture. Evaluation of the Electrohomoeopathy drugs as definite designated names and denotations. The production "Involute the Spagyric KRAUSS or Spagyric dilution. The four categories of Spagyric KRAUSS be made: Spagyric- D1, Spagyric- D2, Spagiric-D3, Spagiric-D4, all in decimal scale. That is 1 part original tincture and 9 parts of ethanol 30%. Thus Spagyric D2 is made in this way SPG-D3, SPG-D4 are made.

Involution: The original tincture is corresponding to the decimal dilution 2nd decimal dilution (D2) will be produced from 1 part original tincture and 9 parts ethanol 30%.

General stipulations: The distillation residue will be pressed out, dried and incinerated at about 400 degrees centigrade. The ash will be added to the distillate the mixture can be filtered after 18 hours.

Involution: The original tincture is corresponding to the 1st decimal dilution (0= DE). The 2nd decimal dilution (D2) will be prepared from 1 part original tincture and 9 parts of a mixture of 2 parts ethanol percent and 1 part water. The following dilutions will be worked out correspondingly.

Labelling: Preparations as per rule 26 contain the addition spagirical Zimpel in the designation the same is valid for the manufactured forms of remedies. Rule 27 spagirical original tincture as per Krauss and

their liquid dilutions. Spagirical original tincture as per rule 27 will be produced from fresh plants or parts of plants, which contain more than 70 per cent moisture (loss on drying) as per the following method. The plant (vegetable) material will be finely crushed and cooled. The loss on drying determined from a sample. The plant mass will be mixed with water. Sucrose and yeast in a sufficient container the quantity water (W) will be calculated as the formula.

$$W = \frac{M.T}{100} \times KG$$

The required quantity of sucrose (S) as per the formula $S=2M. T$ (Kg)

The required quantity of yeast (H) as formula

$$H= 0.1 \times M \times T \text{ (KG)}$$

The container will have closed with a fermentation attachment and the preparation shall be left for fermentation at a temperature of 95 degree Fahrenheit.

Production: As soon as the process of fermentation comes to a standstill, the preparation will be pressed and the solution is kept at temperature below 20 degrees Centigrade and protected against light. The air-dried pressed out residue will be percolated with ethanol 86 percent as the method described in the monography extract of the pharmacopoeia the total quantity of ethanol 86 percent (A) required for will be calculated as the per the formula.

$$A = \frac{M.T}{100} \times KG$$

M- Weight of the plant mass in KG. T- Drying loss of sample.

The original tincture contains a mixture of 2 parts pressed out liquid 1-part percolate and 7 parts ethanol 30%. The original tincture should be kept for at least 5 days in temperature below 20 degrees Centigrade. After this process, the preparation can be filtered.

Involution: The original tincture is corresponding to the 1st decimal dilution (0-D1). The 2nd decimal dilution (D2) will be

prepared from 1 part original tincture and 9 parts of 30 %. The correspondingly will be produced the following dilutions.

Labelling: Preparations as per rule 27 contain the addition spagirical Krauss in the designation the same is valid for the manufactured forms of remedies. Rule 28

spagirical original tincture as per Krauss and their liquid dilutions. Spagirical original tincture as per rule 28 will be produced from fresh plants or parts of plants, which contain more than 40 and not less than 70 percent moisture (drying loss) and will be manufactured in the method described in rule 27.

Table 1: Brief summary and common method of natural products plants extraction.

Extraction Method	Extraction media	Favorable Temperature	Optimum Pressure	Duration of Extraction	Polarity of natural products extracted
Percolation	Aqueous (water) and non-aqueous solvents	Room temperature, occasionally under heat	Atmospheric pressure	Long duration	Dependent on extracting solvent
Maceration	Aqueous (water) and non-aqueous solvents	Room temperature	Atmospheric pressure	Long duration	Dependent on extracting solvent
Decoction	Water	Under heat	Atmospheric pressure	Moderate duration	Polar compounds
Soxhlet extraction	Organic solvents	Under heat	Atmospheric pressure	Long duration	Dependent on extracting solvent
Reflux extraction	Aqueous (water) and non-aqueous solvents	Under heat	Atmospheric pressure	Moderate duration	Dependent on extracting solvent
Supercritical fluid extraction	Supercritical fluid (usually S-CO ₂), sometimes with modifier	Near room temperature	High pressure	Short duration	Nonpolar to moderate polar compounds
Pressurized liquid extraction	Aqueous (water) and non-aqueous solvents	Under heat	High pressure	Short duration	Dependent on extracting solvent
Ultrasound assisted extraction	Aqueous (water) and non-aqueous solvents	Room temperature, or under heat	Atmospheric pressure	Short duration	Dependent on extracting solvent
Pulsed electric field extraction	Aqueous (water) and non-aqueous solvents	Room temperature, or under heat	Atmospheric pressure	Short duration	Dependent on extracting solvent
Microwave assisted extraction	Aqueous (water) and non-aqueous solvents	Room temperature	Atmospheric pressure	Short duration	Dependent on extracting solvent

Hydro distillation and steam distillation	Water	Under heat	Atmospheric pressure	Long duration	Essential oil (usually non-polar)
Enzyme assisted extraction	Aqueous (water) and non-aqueous solvents	Room temperature, or heated after enzyme treatment	Atmospheric pressure	Moderate duration	Dependent on extracting solvent

Unlike the rule 27, the required quantity of distilled water will be calculated as per below

$$W = \frac{2 M.T}{100} X KG$$

General specifications: The required quantity of sucrose (S) as per the formula

$$S = 3M. T (G)$$

The required quantity of yeast (H) as formula

$$H = 0.15 \times M \times T (G)$$

Involution: The original tincture exists of a mixture of 3 parts pressed out liquid. One-part percolate and 6 parts ethanol 30 percent. The original tincture should be kept for at least 5 days in temperature below 20 degrees Centigrade. After this process, the preparation can be filtered. The original tincture is corresponding to the 1st decimal dilution (0=D1). The 2nd decimal dilution (D2) will be prepared from 1-part original tincture and 9 parts of 30 percent ethanol. The following dilutions will be worked out correspondingly.

Labelling

Preparations as per rule 28 contain the addition spagirical Krauss in the designation the same is valid for the manufactured forms of remedies. Rule 29 spagirical original tincture as per Krauss and their liquid dilutions. Spagirical original tincture as per rule 29 will be produced from fresh plants or parts of plants, which contain more than 40 and not less than 70 percent moisture (drying loss) and will be produced as per method described in rule 27. Unlike the rule 27, the required quantity of distilled water will be calculated as per below formula.

$$W = \frac{3 M.T}{100} X KG$$

The required quantity of sucrose (S) as per the formula

S= 4M. T (G) The required quantity of yeast (H) as formula

$$H = 0.2 \times M \times T (G)$$

T= Drying loss of sample in percent required quantity of ethanol 86% (A) as per the formula

$$A = \frac{2 M.T}{100} X KG$$

The original tincture exists in a mixture of 2 parts pressed out liquid. One-part percolate and 2 parts ethanol 30 percent. The original tincture should be kept for at least 5 days in temperature below 20 degrees Centigrade. After this process, the preparation can be filtered.

Involution: The original tincture is corresponding to the 1st decimal dilution (0=D1). The 2nd decimal dilution (D2) will be prepared from 1-part original tincture and 9 parts of 30 percent ethanol. The following dilutions will be worked out correspondingly.[16]

CONCLUSION:

Natural plants contributing development of new drugs since ancient day. There is various system of medicine in world even they share similar source of therapeutics, but they are showing different from each other due to several factor like principal, philosophy, inventor, modify pharmacological activity like pharmacokinetic and pharmacodynamics

activity due to its process of preparation and extraction. So Cohobation process used Electrohomoeopathy for the preparation of Spagyric essence distillation retain the electrolyte properties of the plants and this is critical to the healing process of all the acute and chronic diseases. Electrohomoeopathysystem of medicine having added advantage for mankind should be supported motivated and require further innovation, research and development.

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