



Lesson 2

Internal Preparations 1

Introduction

Welcome to Herbal Pharmacy Lesson 2. This lesson will guide you through different methods of crafting popular internal herbal preparations such as tinctures, flower essences, glycerites, honeys and vinegars. You will also gain an understanding of alcohol dilution and weight-to-volume ratios and how to effectively log this information for your records.

Before we get started with internal preparations, there is a bit of housekeeping and general alignment around crafting quality medicine I'd like to share with you. These 8 points are a few tips that I have found useful in my understanding of best practices when crafting plant medicine.

1. When making internal preparations it should be your top priority to create a clean “food safe” working environment before you get started. Be responsible with how and where you work.
2. Following/creating good recipes, keeping logs, and comparing results for accuracy, can make the difference between good herbal preparations and great preparations.
3. In order to get comfortable with the process, be sure to start with small batches. Don't commit to large harvests and extraction techniques until you have confidence in your craft. Even if it takes more time, it is far better to make 5 small batches than 1 big one at first.
4. Making medicine is as much an art as it is a science. Don't forget this! Let your crafty artistic feeling side mingle with the ingredients you are working with. Get creative, and don't be afraid to modify techniques, recipes, and logs as you go. The best logs and recipes are strongly influenced by qualitative data observed during previous batches.
5. Be sure to let both your heart as well as your mind stir your medicine crafting experience.
6. Practice softening your energy when working with plants, allow yourself to be receptive to the essence and energetic qualities that each plant holds. Before you start, take time to ground, either in nature or with 3 intentional deep breaths. Leave ‘your stuff’ at the door if you can.
7. Crafting medicine is an invitation to facilitate the transference of a plant's inherent wisdom and intelligent design into a format that can be most appropriately experienced by the person consuming it. The best medicines are far more than just the extraction of chemistry. They are built on the right relationship and comfortability with both plants and the craft.



8. Making internal preparations comes with energetic responsibility. When people are consuming your products as medicine, they are making a non-verbal trust contract with you. Remember to honour that contract and treat both people and plants with care and integrity.

Introduction to Tinctures



Tinctures are not all that difficult to make for beginner Herbalists, and for many reasons are often the best way to prepare medicinal plants. They are not the only method of extracting herbs however, and despite their popularity in clinical practice, tinctures are not always the best way to administer a remedy. Alcohol itself has pronounced physical effects in the body, and according to Ayurvedic theory, adds a pungent quality to a medicinal herb. Pungent is represented by hot and dry qualities and thus tinctures, and to some extent, all alcoholic preparations will promote these qualities in the body. Additionally, because a tincture only represents those constituents in a plant that are alcohol-soluble, a tincture cannot represent the qualities of the whole plant. The one exception to this rule are spagyric tinctures, in which the marc is reduced to ash and added back to the tincture (more on spagyrics in lesson three).

One of the key advantages of tinctures is **preservation**: the alcohol in a tincture acts as a preservative and provided your finished extract has a minimum of 25% alcohol, the tincture, if kept in a cool, dry and dark location may last decades depending on the herb. Alcohol is also an effective solvent for many bioactive constituents,



including glycosides, tannins, alkaloids and several other chemicals. Alcohol, however, is not a solvent to all chemicals, and if the plant you want to tincture is high in polysaccharides, for example, these will not be extracted in the tincture.



****Please note that when we are referring to alcohol, we are referring to ETHYL ALCOHOL ONLY. This kind of alcohol is derived from food plants and is sometimes written as ETOH or etOH in shorthand. ISOPROPYL and METHYL alcohol are TOXIC and should not be consumed.*

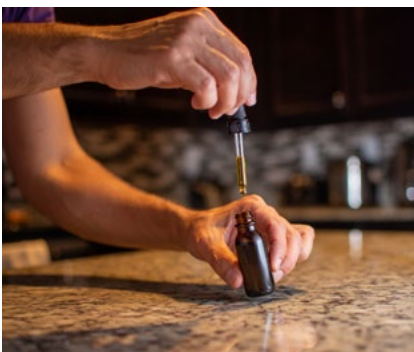
When preparing a tincture, it is important to record the following information:

- Scientific binomial
- Common name
- Plant part used
- The ratio of herb to menstruum
- Alcohol used & concentration

Example: *Apocynum androsaemifolium radix* (Dogbane, Canadian Hemp), dried root, 1:5, 50% alcohol.

This means that 1 part herb (by weight) is used along with 5 parts (by volume) of 50% alcohol, e.g. 200 grams of herb and 1000 mL (1 litre) of 50% alcohol.

Preparing a Tincture



Macerations

Macerations are a simple and easy way to prepare a tincture and can be made at home with minimal equipment. Traditionally, macerations are prepared on the New Moon and then pressed out on the Full Moon.

DRIED PLANT MACERATIONS

A dried plant maceration is made by taking the finely chopped herb or coarsely ground herb (not powdered), and placing it in a resealable vessel, such as a mason jar, and adding the menstruum. In most cases a dry plant maceration will be made at a ratio of 1:5. For a comprehensive list of herbs and their recommended ratios and alcohol concentrations, see this amazing resource from the late Herbalist Michael Moore: <https://www.swsbm.com/ManualsMM/HerbTinct3.txt>

Macerations can be stronger, but without a hydraulic press there is only so much of the marc that can be reasonably squeezed before exhaustion or tendonitis sets in. The maceration should be shaken vigorously for several minutes after adding the menstruum, and then placed in a dark location. The maceration must be shaken vigorously every day for several minutes, for 10-14 days. When working with dried plant material we can use alcohol with a concentration of around 40-50% (80-100 proof) such as vodka or brandy with good results or we can use ethyl alcohol which has a higher concentration of 95% (190 proof), and then dilute with water to achieve the desired alcohol concentration.



An old-fashioned tincture press

EXPRESSION

Expression is the forcible separation of liquid from solid, or in our case, the tincture from the marc. Pressing the marc is an important issue as far as economy goes, and the cost-benefit ratio of squeezing absolutely everything out of it must be carefully considered.

A **hydraulic press** is the best of all options but is a fairly significant investment. A typical hydraulic press consists of a rectangular metal frame, containing a jack that supports a pressing tray, and a metal plate that is fastened to the frame above the pressing tray. The herb is placed in the pressing tray and lifted up by the jack. This causes the pressing tray to push up against the metal plate above, with the herb being compressed between the bottom of the pressing tray and the metal plate. A small hole in the pressing tray allows the tincture to escape. To avoid having the marc block the drain in the pressing tray, the tray is lined with cheesecloth.

Another way to separate the tincture from the marc is with a **screw press**, which is the same as a wine press. Once again, cheesecloth should line the bottom of the press to filter the tincture.

A **lever press** is easily made with two 2X4s, one or two feet in length, with the two ends hinged together. Portions of the marc are wrapped in some cheesecloth and placed in the jaws of the press and squeezed over a large stainless steel bowl. Some people also use their household juicers or a potato ricer to press out the marc, which is fine for herbaceous materials but not recommended for hard or woody materials.

FRESH PLANT MACERATIONS

A fresh plant maceration is perhaps the best way to tincture a plant, especially if the plant is rich in volatile constituents that are lost upon drying. A fresh plant tincture, more than any other kind of preparation other than a fresh plant infusion, captures the entire essence of the plant. Many herbalists who use tinctures in small, almost homeopathic doses rely heavily upon fresh plant extracts, as the entire character of the plant is immediately accessible by taste.



To prepare a fresh plant tincture, chop the fresh herb, flowers, root, or bark into small 2 – 3 cm chunks, and cover with pure alcohol (95% or 190 proof). The ratio for herb to alcohol is usually 1:2, although a 1:1 is also possible if the herb can be compressed into a small enough vessel for the alcohol to cover the plant completely, blending the plant material with a small amount of alcohol to create a slurry can help achieve these ratios. For a comprehensive list of ratios and alcohol concentrations, see this resource from the late Herbalist Michael Moore: <https://www.swsbm.com/ManualsMM/HerbTinct3.txt>

For making smaller amounts I highly recommend using the 1.5 liter snap-lid canning jars (or “sealers”) to process 500g of the fresh herb with 1 liter of alcohol. This is allowed to sit for 7 – 10 days before pressing.

Unlike dried plant tinctures, a fresh plant maceration does not require any shaking if it is made with pure alcohol. This is due to the osmotic pressure induced by the addition of alcohol which causes the cell walls to burst, and the net movement of water and solutes from the plant into the menstruum. As alcohol penetrates the



tissues of the plant they become totally dehydrated, and by the end of maceration, the marc is a lifeless yellowish mass of dead plant tissue.

Despite being made with pure alcohol, a fresh plant tincture will also contain much of the water that was in the plant, but not usually enough to dilute the tincture beyond the minimum preservation level of 25% alcohol. Nonetheless, many herbalists will like to play it safe and make sure that the fresh herb is not wet before maceration, and some will even wilt the fresh plant a day or so before maceration. A fresh plant tincture is also far easier to press than a dry plant tincture, and in many cases doesn't need much pressing at all, and can be done by hand and some cheesecloth.

EQUIPMENT & SUPPLIES FOR TINCTURE MAKING

- Measuring vessel
- Kitchen scale
- Mason jar
- Cheesecloth
- Plant press/Strainer
- Alcohol
- Water
- Plant Material

SLEEP TIGHT TINCTURE FORMULA

- 2 parts *Eschscholzia californica* (California poppy)
- 2 parts *Passiflora incarnata* (passionflower)
- 1 part *Humulus lupulus* (hops)
- 1 part *Scutellaria latiflora* (skullcap)

UTI TINCTURE FORMULA

- 2 parts *Solidago spp.* (goldenrod)
- 2 parts *Arctostaphylos uva-ursi* (Uva-ursi)
- 2 parts *Zea mays* (corn silk)
- 1 part *Juniperus spp.* (juniper berry)

FOCUS TINCTURE FORMULA

- 2 parts *Ocimum tenuiflorum* (tulsi)
- 1 part *Centella asiatica* (gotu kola)
- 1 part *Bacopa monnieri* (brahmi)
- 1 part *Salvia rosmarinus* (rosemary)