Tincture Making Lab Page

Plant Name: Folk Name or *Latin Binomial*

Date of Harvest_____

Date of Production_____

Fresh herbs weight _____

Take 100 gm of herb and dry in toaster oven. Weigh remaining dry herb and calculate % water. Apply to total mass of harvest to get dry weight of herbs.

Example: 100g fresh herb. Dried to 30g. 70g water or 70% water. 1000g fresh herb is 300g dry herb and 700g (or 700mL) water.

Dry herb weight _____

Weight to Volume **1:5** Grams of herb in given Volume of finished tincture. G/mL

Total Menstruum _____ Dry weight of herb X 5

% Alcohol _____ From list King's, Felter / Lloyd, Henriette

Total Alcohol_____ Multiply % alcohol by total menstruum. %Alc X Tot menstruum.

Total Water _____ Subtract Total Alc from Total Menstruum = Tot H2O. If using fresh herbs, then calculate water in herb and subtract from total water. Add the missing amount to make total.

Macerate one month.

Press and **Filter** and **Receive** _____ (final volume)

Fresh weight	Dry Weight	Ratio Wt / Vol	Total Menstruum	Total Alcohol	Total H2O

Tincture Making Components

Herbs dry or wet / fresh.

Menstruum: Solvent for extracting herbs.

Water is the universal solvent and main element of tissue fluids.

Alcohol is relatively non polar and dissolves what water will not. Acts as a preservative When over 25% of fluid is alcohol.

Vinegar acidifies solution increasing solubility of minerals and alkyloids.

Glycerine is weaker than alcohol and tastes sweet and has a short shelf life. Good for children and (ex / alcoholics) and stabilizes tannins.

Marc : Dry component after extraction.

Vessel: Glass or ceramic of a volume greater than Marc + Menstruum. For making and receiving.

Dispensing Vessel: Where final medicine is kept. A medicine bottle with proper label.

Product name, batch date & dispensing instructions.

Angelica archangelica rad, 1:5 70% Nov/2012

Take 5 mL in water before meals

Comminution: Cleaning herbs and reducing size. Remove leaves from stems, wash of dirt from roots, And grinding herb to increase surface area exposure.

Pressing & Filtering: Squeezing out menstruum from marc and removing sediment.

Recording: Recipe book and lab book to record success and failures to regulate production.

Ethanol Percentages for Hydroethanolic Plant Extracts, cont.		
A Note About Extract Ratios	**Medium-ethanol (40 – 60 %)**	**High-ethanol (60 – 90 %)**
Extract ratios, which give us information about the overall concentration of an herbal product, are expressed separately from ethanol/water percentages. Extract ratios tell how much herbal material was used to make a given volume of the extract. Ethanol/water percentages, on the other hand, indicate the polarity of the hydroethanolic solvent, and therefore which sorts of constituents it will dissolve. In general, for liquid preparations, extract ratios are expressed in grams per milliliter (dry-weight-to-volume or w/v). As the concentration decreases, the number to the right of the colon increases. For example, a 1:1 extract contains the soluble matter from one gram of herbal material in every one milliliter of finished product. A 1:2 ratio means that the extract contains the soluble constituents from one gram of material in every two mL, which is only half as concentrated as a 1:1 extract; and a 1:5 is even more dilute. On the other hand, extract ratios for concentrated powdered products (where the herb has been extracted with a solvent, then subsequently dried) are expressed on a weight-to-weight (w/w) basis. The number to the left of the colon increases as the concentration increases. For example, a 2:1 powder contains the extracted constituents from two grams of starting material in one gram of finished product. A 2:1 extract is twice as concentrated as a 1:1 extract, and a 4:1 product is twice as concentrated as the 2:1. Very concentrated extracts (e.g., Grape seed or Ginkgo) will often have high ratios such as 50:1 or more.	Devil's Club ~ 50 – 55 %	Lavender ~ 80 – 85 %
	Echinacea ~ 45 – 60 %	Milk Thistle ~ 65 – 75 %
	Elderberry ~ 40 – 50 %	Myrrh ~ 70 – 90 %
	Fenugreek seed ~ 50 – 60 %	Olive leaf ~ 85 – 95 %
	Fo-Ti ~ 40 – 45 %	Oregano ~ 65 – 75 %
	Feverfew ~ 50 – 65 %	Oshá ~ 60 – 75 %
	Ginkgo ~ 55 – 65 %	Passionflower ~ 65 – 75 %
	Goldenrod ~ 50 – 55 %	Peppermint ~ 60 – 90 %
	Gotu Kola ~ 40 – 50 %	Propolis ~ 75 – 90 %
	Hawthorn ~ 40 – 45 %	Raspberry leaf ~ 35 – 65 %
	Helonias ~ 40 – 45 %	Rosemary ~ 65 – 70 %
	Hyssop ~ 50 – 55 %	St. John's Wort ~ 50 – 75 %
	Lemon Balm ~ 45 – 60 %	Sage ~ 70 – 75 %
	Lobelia ~ 40 – 45 %	Saw Palmetto ~ 60 – 80 %
	Maca ~ 50 – 60 %	Schizandra ~ 70 – 80 %
	Mistletoe ~ 45 – 50 %	Thyme ~ 70 – 75 %
	Motherwort ~ 40 – 60 %	Turmeric ~ 60 – 70 %
	Muira Puama ~ 55 – 60 %	*Usnea* ~ 60 – 95 % 70
	Mullein ~ 40 – 50 %	Vitex ~ 60 – 75 %
	Nettles ~ 40 – 55 %	Wormwood ~ 50 – 75 %
	Oats ~ 30 – 50 %	Yarrow ~ 55 – 70 %
	Olive leaf ~ 55 – 65 %	Yerba Mansa ~ 70 – 75 %
	Oregano ~ 55 – 65 %	Yerba Santa ~ 70 – 75 %
	Oregon Grape ~ 40 – 65 %	Yohimbe ~ 65 – 75 %
	Passionflower ~ 50 – 60 %	
	Pau d'Arco ~ 40 – 50 %	
	Plantain ~ 45 – 55 %	
	Pleurisy Root ~ 40 – 45 %	
	Raspberry leaf ~ 35 – 65 %	
	Red Clover ~ 40 – 50 %	
	Red Root ~ 45 – 55 %	
	Rhodiola ~ 40 – 60 %	
	St. John's Wort ~ 50 – 75 %	
	Sarsaparilla ~ 40 – 50 %	
	Skullcap ~ 40 – 50 %	
	Schizandra ~ 55 – 65 %	
	Shepherd's Purse ~ 40 – 45 %	
	Stillingia ~ 50 – 55 %	
	Stoneroot ~ 35 – 50 %	
	Uva Ursi ~ 35 – 60 %	
	Valerian ~ 50 – 60 %	
	Wild Geranium ~ 50 – 55 %	
	Wild Yam ~ 45 – 60 %	
	Wood Betony ~ 55 – 60 %	
	Wormwood ~ 50 – 75 %	
	Yarrow ~ 55 – 70 %	
	Yellow Dock ~ 40 – 55 %	

Hydroethanolic Plant Extracts

The ranges below are based on historical usage, data from old pharmacopoeias, and generalized contemporary practices. Different ethanol/water ratios, of course, will extract a different array of constituents from the plant. Consider these to be guidelines only. Once you have studied the constituents in the different plants, you can correlate what you know about their solubility with these extraction strategies.

Ethanol Percentages for Hydroethanolic Plant Extracts		
Low-ethanol (20 – 40 %)	**Medium-ethanol (40 – 60 %)**	**High-ethanol (60 – 95 %)**
Bladderwrack ~ 20 – 30 %	Artemisia annua (Sweet Annie) ~ 50 – 60 %	Angelica ~ 70 – 75 %
Cascara Sagrada ~ 20 – 30 %	Astragalus ~ 40 – 50 %	Arnica ~ 65 – 70 %
Cleavers ~ 30 – 35 %	Black Walnut ~ 40 – 55 %	Ashwagandha ~ 60 – 65 %
Dandelion ~ 35 – 45 %	Bladderwrack ~ 40 – 45 %	Black Cohosh ~ 65 – 85 %
Eleuthero (Siberian Ginseng) ~ 30 – 40 %	Bloodroot ~ 55 – 60 %	Buchu ~ 75 – 85 %
Eyebright ~ 25 – 40 %	Blue Cohosh ~ 55 – 65 %	Cayenne ~ 70 – 85 %
Ginseng (*Panax* spp.) ~ 20 – 40 %	Blue Vervain ~ 40 – 45 %	Chamomile ~ 60 – 70 %
Gotu Kola ~ 25 – 40 %	Boneset ~ 40 – 45 %	Chaparral ~ 60 – 75 %
Green Tea ~ 25 – 40 %	Bugleweed ~ 50 – 60 %	Chickweed ~ 65 – 70 %
Horsetail ~ 30 – 40 %	Burdock ~ 40 – 60 %	Cinnamon ~ 60 – 70 %
Licorice ~ 25 – 35 %	California Poppy ~ 55 – 60 %	Devil's Claw ~ 60 – 65 %
Marshmallow ~ 20 – 30 %	Cat's Claw ~ 50 – 65 %	Dong Quai ~ 60 – 70 %
Oats ~ 30 – 50 %	Celandine ~ 50 %	Elecampane ~ 65 – 70 %
Pau d'Arco ~ 25 – 40 %	Chamomile ~ 50 – 60 %	Fennel seed ~ 60 – 65 %
Raspberry leaf ~ 35 – 65 %	Cilantro ~ 50 – 60 %	Ginger ~ 60 – 80 %
Red Root ~ 30 – 40 %	*Coleus forskohlii* ~ 40 – 60 %	Ginkgo ~ 55 – 65 %
Reishi ~ 20 – 25 %	*Coptis* ~ 50 – 60 %	Goldenseal ~ 55 – 65 %
Sarsaparilla ~ 20 – 30 %	Cornsilk ~ 50 – 55 %	Grindelia ~ 65 – 70 %
Uva Ursi ~ 35 – 60 %	Cramp Bark ~ 50 – 65 %	Holy Basil ~ 65 – 80 %
Willow bark ~ 20 – 40 %	Damiana ~ 55 – 65 %	Jamaican Dogwood ~ 70 – 80 %
	Dandelion ~ 35 – 45 %	Kava ~ 65 – 90 %