**How to figure out how much is in a 2% or 3% solution?**

First think of things in drops. If you have 100 drops of something you would have a 2 percent solution if 2 drops were an essential oil and 98 drops were a carrier oil. Or another way to measure it would be 2 ml of essential oil and 98 ml of the carrier oil.

Looking at the first example. 2 drops of Essential oil - that is easy. But the 98 drops of carrier oil that is not so easy, but you can do a little more math and convert the drops into teaspoons.

Since there are about 20 drops per ml and 5 ml per teaspoon you can easily figure it out. 98 divided by 20 is approximated 5. So you have 5 ml or 1 teaspoon (or 98-100 drops of carrier oil).

A 2% solution would be 2 drops essential oil per teaspoon of carrier oil. 3% would be 3 drops per teaspoon.

Some essential oils work better when mixed with different carrier oils. So if you see your essential oils not mixing with particular carrier oil, you will have to experiment with another carrier oil.

For more details in measuring for specific percentages including easy to use percentage tables visit the page on Measuring, Percentages and How much - Type Measuring in the Search box.

Some essential oils and absolutes will become 'saturated' into a carrier oil. When this occurs you can not get any more essential oil or absolute to mix in with the carrier oil.

You will see it initially being in solution, but if you let it set for a day or two, you will either see the absolute sitting on the bottom or the essential oil sitting on the top of your carrier oil.

Actually, this can happen with any unscented base product when used especially those that are considered a water based product. Shampoos, conditioners, and lotions are all prone to having the essential oil separate out. (Did you remember to use an emulsifier for your shampoo or bottle of water in your spray mister?)

Simply shake, or stir your bottle of product to mix the essential oils back into the product before using. Actually, shaking your blends a little before using is a good thing to do so as to redistribute your essential oils in the product.

Blending just Essential oils together is very easy to do and there really is no right or wrong way to blend them. Of course if you are following a recipe it is very very easy to do. Just follow the recipe.

If you become ‘adventuresome’ you need to be aware of the fact there are a few essential oils when blended together that will not mix or they actually will cause a chemical reaction and become a solid chunk of 'goo' in the bottom of your bowl, bottle or jar.

The most problematic is Citrus oils i.e. Sweet Orange, Blood Orange or Lemon when mixed with Cinnamon or clove oils.

Fortunately, this is rare. Unfortunately the glass bottle, bowl or jar will be ruined.

When blending essential oils recipes that have those particular oils in the recipe - I always mix the majority of the blend then add those at the very end - First one then mix thouroughly, then add the other. This reduces the possibility of 'goo'. You may see sediment, but usually it won't be 'goo'.

Do not let anything stop you from being creative. Essential oils are oils composed of several different chemical constituents. When mixed together you will sometimes see them get cloudy, then add another essential oil and the mixture will become clear. Sometimes the blend will cause sediment to form.

These are normal reactions when you mix certain essential oils together. Even though you are not a chemist you will eventually observe these reactions when blending different oils or when making up our blends.

**Next: Storing your custom blends**

Your creations made using carrier oil or base product such as shampoo can be stored in PET plastic or HDPE plastic. Glass can be used too, but I do caution you that if you use it in the shower or should it fall out of a wet hand it could put broken glass where you don’t want it.

On the other hand your blends of PURE undiluted essential oils should be stored in glass bottles only.

Be sure to put labels on everything you make and especially those products with the essential oils you used.

**How long will they last or when do I need to use them up?**

We do suggest that you only mix as much as you will use in 4-6 months. You always want to try to use the freshest blends and essential oils.

If you are blending essential oils with just plain distilled water for a room or linen spray you need to keep this refrigerated and use within 2 weeks. Because there is no preservative present you risk the possibility that mold or other contaminates could grow.

When mixing massage or bath blends we suggest you mix the essential oils together first before you add the carrier oil. Then let the mixture "age" or blend for several days before using. You will be surprised at how much the scent can change after a few days.

Remember also that pure essential oils will disintegrate rubber and certain types of plastic materials. Never leave your bottles stopped with rubber bulb capped droppers. In just a few days the rubber will be a terrible blob of black goo!

To blend essential oils with carrier oils you can mix them in PET plastic bottles or Glass bottles. PET and HDPE plastic bottles will not deteriorate when used with essentials oils, other types of plastic bottles may.

**Storing Essential oils or Synergy blends.**

Store your pure essential oil creations in glass bottles. Keep them away from heat. Ideally keep them in the refrigerator.

The color of the glass doesn’t matter as long as it has a tight cap and is kept away from heat. Light in itself will not deteriorate essential oils but the heat that is created especially by sunlight can increase the rate of oxidation of the essential oils and deteriorate them very quick.

Remember heat and oxygen will ruin your essential oils and blends. Do not leave the caps off your bottles – even while blending – keep them shut tight except when using them to add to your blend.

**CLEANING YOUR GLASSWARE**

After a busy day of blending the clean up will begin. If you wish to reuse your essential oil bottles you will need to clean them thoroughly.

Use the hottest water available and some soap or detergent. Let them soak for a few minutes. Use a small bottle cleaning brush to clean the insides, especially if you need to remove sediment. In tiny bottles you can use a Q-tip or tooth pick to remove stubborn remnants.

Rinse with more hot water and turn upside down to drain on clean paper towels.

You are not done yet though, as you still could have a little bit of essential oil residue left inside your bottles or droppers.

The last thing to do is to rinse everything with alcohol. We don’t recommend rubbing or denatured alcohol as they have too much water content and other impurities in them. You can use a high “proof” cheap vodka. It is virtually odorless and has no impurities.

The alcohol dissolves and helps remove any residual essential or carrier oils that might be in your bottles and droppers.

Using alcohol as the final rinse will help your glassware to dry quickly, enabling you to be able to store them away for your next blending session.

Do not try to clean anything that is made of plastic as essential oils quickly permeate this and make it nearly impossible to remove scents.

A word of warning: Do not put any beaker or glassware, or stainless steel bowl that has essential oils in them in your dishwasher. The small amount of essential oils could potentially damage your dishwasher. Wash all your supplies in a sink with hot soapy water. Rinse and dry. Sorry but you don’t want to ruin your dishwasher.

Here is an example for you, of how to blend, using a recipe from the book “Aromatherapy Recipes Using Pure Essential oils Volume 1” by Penny Keay

**For Your Sprayer (A Light Wonderful Air Freshener)**

Lavender -15 drops
Orange -10 drops
Lemon - 10 drops
Grapefruit -10 drops
Lime -6 drops
Nutmeg -3 drops
Room Spray Base -2 ounces
Emulsifier -4-5 ml

Blend all the oils in a spray bottle, add the emulsifier and then the Room Spray Base. Shake well and spray. This is an excellent air freshener for pet odors.

We personally use this blend in our home. It really is great when mildew develops from high humidity days.

To Begin: you have gathered all your supplies and they are sitting on your freezer paper or wax paper covered counter or table.

There are two ways to approach the blending of this Room Spray. First is the way you will most likely use but I’ll give the alternative method too afterwards. Be sure you clean all mixing equipment with a spray of alcohol and let air dry prior to proceeding.

You will need a PET bottle or an HDPE bottle with sprayers. Remove the sprayer. In the empty bottle you will add the emulsifier first. Using a Measuring spoon pour emulsifier in the teaspoon (remember 5 mL is 1 teaspoonful). Then add this to your Spray bottle.

Next you will count out your essential oil drops as you add them to the spray bottle. If you have a 10 mL bottle or larger size that has an orifice reducer , the essential oils will drop out one at a time and you can count them.

IF you have only sample, 2mL or 4mL size bottles or larger bottles without the orifice reducers, you will need to use a pipette and draw out a few milliliters and then count from the pipette. Make sure you use a clean and different pipette for each essential oil as you don’t want to contaminate your essential oils with other essential oils.

Once you have added each of the essential oils to the spray bottle with the emulsifier in it you will ‘swirl’ the bottle around until you have it well blended.

Let it sit for a few minutes to make sure the emulsifier and the essential oils have mixed together. If the essential oils separate out you will need to add more emulsifier. Add several drops and swirl around again. Repeat as needed. In some cases it may take 24 hours for the chemical reaction to happen. Be patient.

Now that the essential oils and emulsifier are well blended then you can add your distilled water. Add the water and swirl around again and then put on the Sprayer top. Shake the blend well and Spritz around the room!

Shake well before each use. Because this is a water based product with no preservative you should keep it refrigerated and use within one month.

**Alternate method:**

Using a glass measuring cup or a glass beaker that will hold 2 ounces or more – such as 100mL beaker, add your emulsifier to the beaker, then add your essential oils as per the recipe: Using a stirring rod or stainless steel spoon, stir until well blended.

Again, let it sit for a few minutes to make sure the emulsifier and essential oils are in the correct proportions. Add more emulsifier if needed.

In some cases it may take 24 hours for the chemical reaction to happen. Be patient.

Once well blended then slowly add your distilled water to the emulsifier-essential oil blend. And stir well.

Then pour into you spray bottle. And as before shake well before each use.

*NOTE: you CANNOT add more emulsifier* to the bottle of spray once you have added water. The essential oils will not be able to be ‘emulsified’ once they have been added to the water if they weren’t already blended well with the emulsifier. Do not despair you can still use the Spray blend but realize you will have to shake it well before each use.

**Alternate Base Products and uses:**

Although the recipe calls for the use of Distilled water you can always substitute our Room Spray Base. This base has preservative in it so you can blend larger amounts and won’t need to keep them refrigerated.

Often times there are substitutions or simple omissions that can be made to any recipe and it will still provide much of the same final intended outcome. Deviate too much and you may have a wonderful newly created recipe that works even better.

And for use in a diffuser – any recipe can just be a blend of essential oils that you blend together in a glass bottle and add to your fan diffuser or oil and tart warmer. If you like the smell of the blended essential oils you don’t have to add them to your shampoo or room sprays. Just add them to your diffuser.

Likewise if you have a blend that is usually just for diffusing, often times you can add it to a bottle of lotion, jar of cream or shower gel. Just remember to follow the guidelines as found in on the measuring and percentages article.

**A Few Questions we have received about blending:**

**Do I need a Preservative?**

That depends if there are water based components. If there are only oil based components then no preservative is needed and the shelf life is as long as the shortest shelf life ingredient in the blend. Water based products have a shelf life without a preservative of only about 2 weeks if kept at room temperature.

The bad news is that there are no really true natural preservatives. Vitamin E and Wheat Germ oil are NOT preservatives. Contrary to what you may have read or been told, they will go rancid very fast when stored at room temperature, in fact faster than some other carrier oils. So don’t rely on them as a preservative.

When you blend just essential oils together you do not need a preservative. You just need to keep the bottles tightly capped and away from heat sources.

When making recipes, do I need to have separate blender, coffee grinder, stainless steel pans, glass bowls etc than I use for my everyday?

You can just use your everyday equipment BUT before using for blending or making your lotions, creams etc. you should spray them with Vodka or other non flavored alcohol, let them dry naturally or use clean paper towels to wipe them dry.

Of course for us here we have our own set of beakers, bowls spoons, etc that we use just for blending but even though we run them through the dishwasher, we spray them with alcohol, dry them before we start measuring and blending.

**My Recipe Flopped – now what to I do?**

It really is rare that you can’t use a mixture of your creations. The most common problem is that sometimes you have tried to add to much essential oils to your personal care product. The only solution here is to keep adding more of your base product until you dilute it down to acceptable scenting levels.

**What do you do if it was just essential oils and you don’t like the smell?**

Here you could add more of an essential oil you like to make it smell more pleasant or you can always use it to scent the garbage bin! Sorry but some recipes don’t smell pleasant but the essential oils in them can still be very beneficial. Hopefully you have written down your recipes so you won’t blend the same unpleasant scent again.

Does it matter what order I blend my essential oils when I’m adding them to my bottles?

This will not matter. We have been blending for more than 15 years and it doesn’t make a blend smell different if you add the first essential oil at the end of your blending.

The ONLY time blending really matters is when you are using an emulsifier. You have to use emulsifier with essential oils FIRST then add to the water base. If you add the emulsifier to the water base and then add your essential oils to that I guarantee the essential oils will float on top!

This should help you get started in learning the basics of blending. Give yourself time. Have fun!

If you have questions remember we are just an e-mail away!

**Happy Blending!**