

# Quick Guide To Solubilisers

[Symbiosolv Clear Plus](#) is a globally accepted natural solubiliser. Solubilisers are great fun to use, but can be tricky to work with if you don't know what you're doing! Here, we share the low down.

## What Is A Solubiliser?

A solubiliser is an ingredient that will dissolve [essential oils](#) into a water base, or 'solubilise' them. Since water and oils don't mix, if you add essential oils to a water based product such as a room spray, they will just sit on top of the water. This can be problematic because the essential oils aren't evenly distributed in solution so you won't be getting an even amount of actives with every spray, and the nozzle may also clog up from the undissolved oils.

## When Do I Need A Solubiliser?

Whenever you need to add essential oils to a water based product but aren't using an emulsifier, use a solubiliser. This can be in toners, spritzers, room sprays, bathroom sprays, linen sprays, body splashes, etc.

## Do I Also Need A Preservative?

Yes, wherever there is water or water based substances, you will require a [preservative](#).

Interestingly, preservatives can assist in increasing solubility. For further information on working with preservatives, please read [Quick Guide To Preservatives](#).

## Is It Normal For My Solubilised Solution To Foam If I Shake It?

You may be surprised to learn that a solubiliser is a type of surfactant, in the same way that a square is a type of rectangle. Surfactants foam and therefore a solubiliser can foam too! This is also why [surfactants](#) can solubilise oils. When shaken up, your solubilised solution may foam a bit. But the beauty of using a solubiliser is that once your essential oils are solubilised, shaking the bottle is no longer a requirement. So it's best to avoid shaking the bottle if you don't like the foamy effect.

## **Will I Get A Clear Solution With A Solubiliser?**

Every essential oil has a 'golden ratio' of solubiliser that will fully solubilise it, resulting in a clear solution.

If the solution is still milky, the essential oil may be solubilised enough that you don't see droplets in solution, but not 100% fully solubilised so that the solution is clear. For some purposes you may not need 100% clarity in solution so the milky look won't matter, but most prefer the clear solution. You will need to find your chosen essential oil's 'golden ratio' in order to achieve this clarity.

## **Factors That Affect Solubility**

If you took chemistry classes you will know that a couple of factors can impact solubility. Some factors include temperature, pressure (not really applicable in this case), polarity (we already know that oils and water don't mix), stirring/agitation (you will be doing this when mixing your water and solubiliser blend together) and pH.

Probably the most important factor affecting solubility here is pH. I discovered an interesting phenomenon when adding my preservative to test samples. Because the pH of the preservative is fairly low, it lowers the pH of the whole solution, and a lower pH can increase the solubility in this case. I added Geogard 221 to a milky solution and it went clear! This can come in handy when you don't want to use too much solubiliser - adding a preservative can help your case.

## **Does A Solubiliser Affect The Scent?**

Probably the main reason you are blending essential oils in an aqueous base is to benefit from the essential oils' scent. Fortunately Symbiosolv doesn't impact the scent at all. The only thing that may impact the scent is the preservative. For instance Geogard and Euxyl both have relatively strong scents of their own. Essential oils do mask this scent but it still may impact the final scent. You may prefer a powdered preservative such as [Geogard Ultra](#) in this case.

## **Does A Solubiliser Affect The Colour?**

Symbiosolv won't affect the colour of your solution. You may want to have a coloured solution, or maybe the essential oil adds some colour (as is in the case of chamomile blue), and you can rest assured the solubiliser won't impact this.

## **How To Use A Solubiliser**

Now that we know a little more about solubilisers, let's get down to solubilising our essential oils.

There are two rules to keep in mind when using a solubiliser.

The first is that every essential oil will have its own unique 'golden ratio' of solubiliser required to solubilise it. This is because each oil has a unique chemical profile. This can also vary from batch to batch of the same oil, so you will need to do a bit of testing for every oil to find the correct amount of solubiliser to use. This may sound like a bit of a painful process but keep in mind rule #2 for solubilisers:

Use as much as needed and as little as possible. This is helpful because you can start low and work your way up.

Here's how to work with [Symbiosolv](#):

We will be working to 100%, with 1% preservative included.

Firstly, you will need an accurate scale to measure your essential oils and solubiliser.

Next, decide how much essential oil you want to use; I typically use 0.5% which is a safe dermal limit for most essential oils.

Determine a starting ratio for the essential oil vs solubiliser. Symbiosolv has recommended usage instructions of 1:3 - 1:5 (oil : solubiliser), with a max solubiliser usage of 4 - 5%. So you can start with a ratio of 1:3 or 0.5% essential oil and 1.5% solubiliser.

Blend the solubiliser and the essential oil together, then blend in the water. You may need to blend or whisk for a few minutes to dissolve everything. Observe your solution to see if the oil droplets fully dissolve and to check the clarity. You may get lucky on your first attempt! If not, don't stress, just note down the ratio and try the next one up (1:4). Don't forget to add in your preservative at the end.

Below are the recommended usage instructions for Symbiosolv:

For a transparent aqueous solution: 1:3 - 1:5 (oil : solubiliser), max usage 4-5%.

For surfactants: 0.5% - 1.5%

Pre-mix Symbio®Solv Clear Plus with essential oils or other lipophilic substance to be solubilised at room temperature. Add water, the aqueous phase, or the surfactant base to the pre-mix, stirring gently. Solution should go from milky to clear. Adjust pH to 4.5 - 6.5 if necessary.

The solubility ratio will be different for every essential oil, so you may need to do some experimentation to find the correct amount of oil to solubiliser for the specific oil you are using.

The essential oils I have worked extensively with as test subjects are [chamomile blue](#) and [sweet orange](#), and they couldn't be further apart when it came to solubilising.

Chamomile blue is a viscous oil so it stands to reason that it may require more solubiliser to get it fully dissolved. I ended up needing six trials to find my golden ratio, which finally turned out to be 1:12 (which is above recommendations but oh well).

For the orange essential oil it was super simple at a ratio of 1:4 after two tries.

The two toners produced smell amazing, and work as a room spray, body splash or as a linen spray. You can also use the solution to make other products such as lotions and creams, facial products, etc

Now it's your turn! Grab your favourite essential oil and turn it into a fabulous spritzer or other product with Symbiosolv.