Yonelys asks....

How to determine the proportion between water and preservative?
Formulating (specifications, characteristics, needs, raw materials) ethnical hair care products.
Does a manufacturer company of raw materials for cosmetics has to be registered with the FDA?

There is no exact proportion of water and preservative. It depends on your formulation. Typically, you
will start with the recommended preservative level of whatever preservative you are using. In most
formulas, the preservative will make up less than 1% of the formula.

No – a raw material manufacturer does not have to be registered with the FDA to sell materials.
However, chemical companies have to follow the rules of the EPA. Here is a link of the requirements.
https://www.epa.gov/regulatory-information-sector/chemical-manufacturing-sector-naics-325

Uli asks...

I have been pondering a remark you made a while back in regards to vegetable glycerin sensitivity:
You had mentioned that you had splattered some vegetable glycerin on yourself and found later, that
your skin was irritated.

1. Could it be that, because vegetable glycerin ""disrupts"" the membrane barrier of cells, that it
perhaps was some other chemical that gave you the irritation, a heightened reaction because of the
glycerin; perhaps glycerin by itself would not give you that reaction?

2. One of my earliest lotion creations has modified potato starch that I add at the end of the cooling
phase. It gives skin a silky feel (duh!), but of course it leaves a powder residue. I am wondering now,
years later, whether formulating with potato starch is perhaps lazy, and whether it would be better to
achieve the silky feel with something else; i.e. less oil, different emulsifiers, that are approved for
""organic"" products.

1. Honestly, I don't remember saying that I splattered glycerin on myself and found my skin
irritated. My skin doesn't get irritated by glycerin. But there is no difference in the type of
glycerin. Vegetable glycerin is exactly the same as petroleum based glycerin. Glycerin can
affect some people however. It just depends on your specific genetics. It doesn't irritate my
skin.

2. There is no such thing as “lazy” formulating. The important thing is to make formulas that
work. However you get it to work is fine. But if you're putting the potato starch in at the end it
probably isn't getting hydrated properly which is why you get the residue. Yes, you can
probably get a silky feel with other approaches as you suggested. It really depends on the
ingredients you are using. Plus the definition of “organic” that you are following. You can't
mean USDA organic because it's not possible to make an emulsion following those standards.

Kim asks...

Any new developments in natural organic preservatives?
Not really. There have not been any new preservative actives developed recently. Most new items are just blends of organic acids, phenoxyethanol, benzyl alcohol, and things like that. There are some more recent enzymatic preservation systems however, these have not been proven effective in most cases.

Haydeh asks...

1. How can I incorporate Ascorbic Palmitate (powder) in a lotion or cream formula without losing the effect?

2. Which kind of delivery system do you recommend for vitamins?

This depends on the type of effect that you are looking to get. In truth, ascorbic palmitate will not have noticeable effects unless used at a very high level.

This depends on the vitamin. In most cases, vitamins in skin care products do not do anything. They don't do anything in hair care products either. However, Vitamin A derivatives and Vitamin C derivatives may have some effect. For Vitamin C it would be best to be delivered from an anhydrous system to help ensure it doesn't break down. If you have Vitamin C in an aqueous system it will not have any noticeable effect. For vitamin A using a standard emulsion can work.

Lisa asks...

Aloe vera extract: Can be confusing because there is aloe vera juice, aloe vera gel and aloe vera powder. Can you define what "extract" means for this ingredient? I have seen an oil called aloe vera oil. But when I looked at the ingredients it was actually soy bean oil with aloe vera extract.

When making a body spray that contains essential oils, is denatured alcohol the recommended main ingredient? Would that allow for the oil to mix with the alcohol so there is no separation? Is denatured alcohol odorless?

There is no standard definition for extract as some people consider squeezing out the juice as an extract or mixing it with water then getting the extract or mixing it with another solvent to get the extract. Aloe Vera Oil is probably just soy bean oil with a sprinkle of aloe vera extract in it. There is no standard for aloe vera oil either.

Yes, you can blend essential oils with alcohol. No, denatured alcohol is not odorless. You'll need to use the right blend of EOs to cover up the odor. Often people blend both alcohol and water to deliver essential oils to skin.

George asks...

If we want to make W/O and O/W cream with 20% oils. What will be the differences in crucial ingredients or in the procedure? Can we make both creams with the same emulsifier?
It's unlikely that you could make a 20% oil emulsion that is water in oil. Typically, an water in oil emulsion is going to need at least 50% of the oil phase. But you could, theoretically, use the same emulsifier for both systems. You just need to vary the oil levels.

Iris asks...

What are some more "healthy" options Non paraben, Urea - powder preservative for usage in color and mineral powders cosmetic products?

This is a tough question because the paraben and urea (formaldehyde donor technology) preservatives are not unhealthy. So, on some level the answer is that there is no more “healthy” option. In fact, since these preservatives have been more thoroughly tested for safety and effectiveness than any other preservative, I would say they are the most “healthy” options.

But you can try some of the organic acids like potassium sorbate or dehydroacetic acid. Use level would be about 0.2%. Benzoic acid is another option, use level about 0.1%

Yin asks...

How can the stability test (at what temperature and test period) be used to determine the finished product has a minimum durability of more than 30 months?

That's a good question. I don't think there is a stability test which can predict almost 3 years. For sunscreens you can do a 1 year stability test at Room Temperature and if it is still functional after a year, you can put a 3 year expiration date on the product. So, 1 yr stability at RT might predict 30 months.

The general rule of thumb is that 8 weeks at 45C is predictive of 1 year at room temperature. However, that's only an estimate and it can be wrong in many cases. But if you wanted to follow that then 45C at 24 weeks should predict RT at 3 years.