

Formulating With Niacinamide

Niacinamide is a form of Vitamin B3, and is a much loved active in the cosmetics industry. You will find it as an ingredient in countless products, which range across the balancing/toning, anti aging, brightening, and skin issues categories.

Its benefits range from balancing sebum production, reducing transepidermal water loss, brightening, to evening out skin tone and even reducing signs of aging and hyperpigmentation.

Fortunately for such a beneficial ingredient, it is also really easy to work with! Apart from some pH considerations, niacinamide is a stable active and plays nicely with lots of other ingredients. Read up more on how to work with it below:

Solubility

Niacinamide is readily soluble in water. Just stir it into hot or cold water to dissolve it.

pH

The pH level of niacinamide is always around the 6 mark. You will need to formulate your products accordingly to allow niacinamide to work properly as it prefers this slightly higher pH level.

Usage

Typical usage rate is 1-10%, although I like to use it at 5%. Studies have shown that this is the most beneficial amount, and using more doesn't lead to greater benefit.

So to use niacinamide, dissolve it into the water phase and ensure the final pH of the product is around 6. You will need to ensure your other ingredients including the preservative are compatible at this pH level as well.

Combinations With Other Ingredients

Niacinamide works well with most other ingredients provided they can handle the pH 6.

Acids - acids are an exception as they tend to work better at much lower pH levels, and reducing the product pH will render the niacinamide less beneficial.

Vitamin C is suitable provided it can handle a higher pH. Ascorbic acid loses its benefits, but you can use [ascorbyl palmitate](#), which is the oil soluble version of Vitamin C.

Hyaluronic acid - yes.

Oils and oil based ingredients - yes, you just need an emulsifier as niacinamide works in water.

Water based ingredients - yes.

Types of Products

Toners, serums, moisturisers, lotions and other leave-on products are all great ways to get niacinamide into your skin.

Like most actives, I don't recommend bothering with it in rinse-off products as it doesn't have enough contact time with the skin to make a difference.

Formulas

Hydrating Niacinamide Toner

5% [niacinamide](#)

93.5% [hydrosol](#), aloe vera liquid gel or even a botanical infusion

0.5% [panthenol](#)

1% [Geogard 221](#)

[Beaker](#)

[Spritzer bottle](#)

Combine everything in a beaker and stir well to dissolve the panthenol and niacinamide. Pour into a bottle.

To use, apply to clean skin then follow up with a moisturiser.

Niacinamide Face, Hand & Body Lotion

Heated water phase

Niacinamide HA Serum

68.5% water / [hydrosol](#) / botanical infusion

5% [niacinamide](#)

3% propanediol

Heated oil phase

3% [Eco E wax](#)

14% [oils](#) of choice: squalane and jojoba are lovely but you can use any

0.5% [vitamin E](#)

Cool down phase

5% [hyaluronic acid](#)

1% [Geogard 221](#)

[Beaker](#)

[Thermometer](#)

Scale

[pH strips](#) or digital pH meter

[Serum](#) or [pipette bottle](#)

In one beaker, combine the heated oil phase ingredients and heat through until fully melted.

In another beaker combine the heated water phase ingredients and bring them up to a similar temperature to that of the oil phase.

Add the oil phase into the water phase and homogenise with a stick/soup blender. Allow the emulsion to cool down to below 35 degrees then add in the cool down phase ingredients. Check and adjust the pH to 6 to accommodate the niacinamide.

Keep your serum in a pretty serum or pipette bottle and layer under your moisturiser.