

## VITAMIN E AND VITAMIN E – MT50 (FULL SPECTRUM)

### What is it?

Also known as Tocopherols, the main difference between the two varieties sold at New Directions Aromatics is:

- Vitamin E – MT-50 has the full spectrum of Tocopherol (D-Alpha Tocopherol, D-Beta Tocopherol, D-Gamma Tocopherol, D-Delta Tocopherol) at 50 % in a base comprised of pure, refined Soy Oil (50%).
- Vitamin E – USP has predominantly the single constituent of D-Alpha Tocopherol at 67% in a base comprised of pure, refined Soy Oil (33%), in which other tocopherols are present in small amounts.

Not a preservative, Vitamin E is instead a powerful antioxidant which keeps lipids from degenerating. Antioxidants are agents that also neutralize the oxidant effect of free radicals, which are basically molecules that not only damage collagen (thus causing skin dryness, fine lines and wrinkles), but trigger immune system responses.

Vitamin E exists in eight different forms, four *tocopherols* and four *tocotrienols*. All feature a chromanol ring, with a hydroxyl group that can donate a hydrogen atom to reduce free radicals, and a hydrophobic side chain which allows for penetration into biological membranes. Both the tocopherols and tocotrienols occur in alpha, beta, gamma and delta forms – *Wikipedia*

### Applications:

Adding 0.5% Vitamin E oil to carrier oil will sustain the oil itself, preventing it from breaking down at its natural rate. To both extend the shelf-life of the oil *and* add benefits to the skin, a minimum of 2% Vitamin E to a max of 30% of the formulation must be used.

**Note:** Vitamin E – USP should *not* be applied directly to the skin, as it is designed to be used in dilution specifically for cosmetic products.

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### Recipe:

Vitamin E is a powerful antioxidant, and works with the fats in your skin just as it works with the oils in a cream or serum. The Essential Oils in this oil-based serum offer very gentle alpha-hydroxy action, and breaks down dead, flaky skin. You may find you don't need to use it every night to have a brighter, healthier glow!

<i>Metric</i>	<i>Ingredients</i>	<i>Imperial</i>
45 ml	Pumpkin Seed Oil	3 T.
15 ml	Rosehip Oil	3 t.
20 ml	Vitamin E Oil	4 t.
3 drops	Bergamot Essential Oil	3 drops
3 drops	Grapefruit Essential Oil	3 drops
3 drops	Lemon Essential Oil	3 drops

- Blend the oils and put them into a sterile bottle with dispensing pump.
- After cleansing the face before bed, apply a few drops and massage gently into facial skin.

### Lab Note: Q&A

Q. D-alpha-Tocopherol is listed with a specification of > 67.11. Since the Assay Value is already listed as 95.0 – 120%, this other value is confusing to us. Is this the actual concentration of the material? In particular, does the D-alpha-Tocopherol value have something to do with the Acid Value?

A. The D-alpha-tocopherol value does not have anything to do with the Acid Value.

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The > 67.11% refer to the minimal percentage of D-alpha-Tocopherol in the product. In the product's base, which is 32% soybean oil, there are other naturally occurring Tocopherol components (e.g. beta and gamma tocopherols as well as D-alpha Tocopherol) so with the minimal percentage of D-alpha-Tocopherol added to the base, the total tocopherols in the product are now pushed up to 95% - 120%.

In the row that identifies the Assay (IU/G) property, the specification is thus listed as 950 IU - 1200 IU (95.0% - 120%) per gram.

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