Vegetable oils are easily integrated in the skin because of the similarities they share with some of the skin's components.

It can be assumed that the closer the formulation of a cosmetic product is to the barrier layers and the sebum, the better the possible care for the skin. Vegetable oils have much more in common with skin than you might realise.

The skin protects itself with the barrier layers in the stratum corneum, which consists of ceramides, fatty acids and cholesterol, and sebum from the sebum glands. Sebum consists of 41% triglycerides, 25% waxes, 16% fatty acids, 12% squalene, 1 – 2% cholesterol and 2% cholesterol esters. Sebum triglycerides resemble the fatty vegetable oils. However, the triglycerides in vegetable oils contain more unsaturated acids like oleic acid, linoleic acid, alpha and gamma linolenic acid in bonded form.

Though mineral oil is much more cost-effective and stable than vegetable oils, the advantages and benefits that can be derived from using these, outweigh the cost difference, because even though, as carriers, they are 'old news', they:

- Integrate into the triglyceride balance of the skin and can eventually be metabolised. Their absorption into the skin is relatively fast, enhanced by the enzymatic hydrolyses into glycerin and fatty acids.
- Reinforce the skin barrier: They contain physiological acids like palmitic acid which is found in the skin barrier, and unsaturated essential omega-6, even omega-3 actives. Linoleic acid indirectly reinforces the skin barrier as it is integrated into ceramide 1.
- Produce anti-inflammatory agents: Linoleic acid, alpha linolenic acid and gamma linolenic acid produce strong anti-inflammatory degradation products in the skin. These metabolites only become effective via cutaneous application of the oils, while the acids orally are metabolized into arachidonic acid respectively eicosapentaenoic acid and their reaction products.
- Could substitute natural cholesterol: Many of the vegetable oils contain phytosterols as side components which are structurally related to the natural cholesterol in the skin and can substitute it if necessary.
- Contain vitamins: Other natural actives such as vit E and D might also be present.
- Smoothe the skin: Due to their lipid character vegetable triglycerides have smoothing effects on the skin.
- Reduce trans-epidermal water loss moderately, but still allow the skin to 'breathe' in order to maintain its natural functions.
- Maintain the skin's natural flora. The triglycerides are broken down into free acids, via their own lipase and esterase enzymes, which protect the body against external

infections caused by pathogens.