

Biomethics® Emulsifiers

emulsifier

Application Sheet

Biomethics® Emulsifiers are based on natural ingredients and bring excellent softness to emulsions. As they do not contain traditional surfactants and PEGs, they do not disrupt skin's natural barrier in the same way as traditional emulsifiers do. Biomethics® Emulsifiers can be used as traditional hot process emulsifiers and the range offers alternatives for cold processing.

Trade Name	INCI Name
Biomethics® LHS	Sucrose Stearate (and) Hydrogenated Lecithin (and) Helianthus Annuus (Sunflower) Wax (and) Helianthus Annuus (Sunflower) Seed Oil (and) Xanthan Gum (and) Tocopherol*
Biomethics® Solanum CPS W/O	Solanum Tuberosum (Potato) Starch (and) Squalane (and) Butyrospermum Parkii (Shea Butter) (and) Helianthus Annuus (Sunflower) Wax (and) Xanthan Gum (and) Hydrogenated Lecithin (and) Tocopherol*
Biomethics® Solanum CPS O/W	Solanum Tuberosum (Potato) Starch (and) Helianthus Annuus (Sunflower) Seed Oil (and) Water (and) Glycerin (and) Lecithin (and) Xanthan Gum*
Biomethics® Solanum W/O	Solanum Tuberosum (Potato) Starch (and) Helianthus Annuus (Sunflower) Seed Oil (and) Hydrogenated Lecithin (and) Helianthus Annuus (Sunflower) Wax (and) Limnanthes Alba (Meadowfoam) Seed Oil (and) Xanthan Gum*
Biomethics® Solanum O/W	Solanum Tuberosum (Potato) Starch (and) Water (and) Helianthus Annuus (Sunflower) Seed Oil (and) Sucrose Stearate (and) Xanthan Gum (and) Hydrogenated Lecithin*

* can be preserved with a preservation system of customer's choice

Emulsifier	Emulsion type	HLB	Processing type	Use level
Biomethics® LHS	O/W	10-12	hot	4-8%
Biomethics® Solanum CPS W/O	W/O	6-8	cold or hot	Minimum 5%
Biomethics® Solanum CPS O/W	O/W	10-12	cold or hot	8-10%
Biomethics® Solanum W/O	W/O	6-8	hot	4-5%
Biomethics® Solanum O/W	O/W	10-12	hot	4-5%

Benefits

- skin compatible
- excellent skin feel
- good emulsion stability without synthetic surfactants
- choices for hot and cold processing
- SPF booster

Properties

- PEG-free
- fully natural



Biomethics® Emulsifiers

Application Areas

Skin Care

Biomethics® Emulsifiers have good compatibility with the skin. They are an excellent choice for skin care emulsions for dry and sensitive skin types due to their minimal impact on skin's lipids and their function as a barrier against moisture loss and protection against external irritants. Biomethics® Emulsifiers can be used in all types of skin care emulsions either as primary emulsifiers or combined together with other surface-active ingredients.

Sun Care

Biomethics® Emulsifiers work well in sun care formulations. They are compatible with both physical and chemical UV-filters and can boost the SPF results. Due to their structure, the Biomethics® Emulsifiers provide an even application to sun care products with Titanium Oxide, where often problems of re-agglomeration occur with normal emulsifiers.

Colour Care

Biomethics® Emulsifiers can be used in foundations and other colour care emulsions such as highlighters and make-up primers. They are recommended particularly for formulations designed for dry and sensitive skin types and when high moisture retention is desired.

Formulating

Biomethics® Emulsifier LHS has to be solubilized in the water phase by mixing gently for about 15 minutes in a water bath at 80°C, and then for 10 minutes under more vigorous agitation. After Biomethics® Emulsifier LHS has been completely hydrated, the oil phase will be added into the water phase. The homogenization has to be done while the emulsion is still hot. Homogenize for 2-5 minutes, but not longer. If homogenized as cold, the emulsion structure will break down.

Typical use level: 4-8%

Both Biomethics® Emulsifier Solanum CPS W/O and Biomethics® Emulsifier Solanum CPS O/W can be used either in cold or hot processing. Biomethics® Emulsifier Solanum CPS W/O should be added to the oil phase and mixed in until a homogenous mixture has formed before combining the oil phase with the water phase. On the contrary, Biomethics® Emulsifier Solanum CPS O/W is added to the water phase and mixed until a homogenous mixture has formed before combining the water phase with the oil phase.

Typical use level: minimum 5%

Biomethics® Emulsifier Solanum O/W has to be solubilized in the water phase by mixing gently for about 15-20 minutes in a water bath at 70-75°C until lamellar structure has formed. After Biomethics® Emulsifier Solanum O/W has been completely hydrated, the oil phase will be added into the water phase. Continue mixing for 15-20 minutes at 800-900 rpm while maintaining the temperature at 70-75°C. The homogenization has to be done while the emulsion is still at 70°C. Homogenize for 5 minutes at 6000 rpm. If homogenized as cold, the emulsion structure will break down.

Typical use level: 4-5%

Biomethics® Emulsifier Solanum W/O should be dissolved in the oil phase in a water bath at 70-75°C. After 15-20 minutes when Biomethics® Emulsifier Solanum W/O has been completely dissolved, add to the water phase. Mix under strong agitation for 15-20 minutes while keeping the mixture at 70°C. The homogenization has to be done while the emulsion is still at 70°C. Homogenize for 5 minutes at 6000 rpm. If homogenized as cold, the emulsion structure will break down.

Typical use level: 4-5%

Packaging: 25kg open-head drums