

OLIVEM[®] 2020

NATURALLY DERIVED COLD PROCESS EMULSIFIER FOR ENERGY-EFFICIENT OPERATIONS

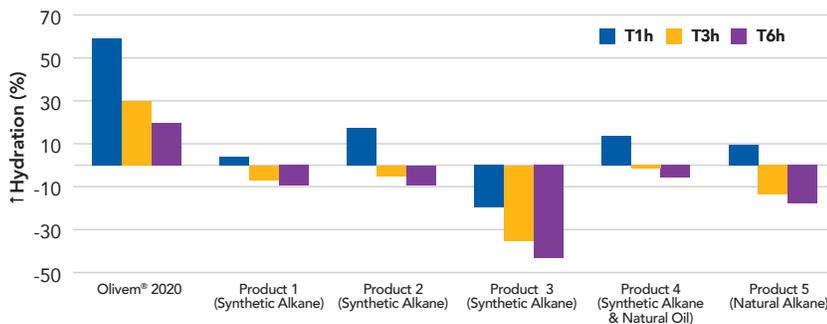
Olivem[®] 2020 is a next-generation, naturally derived cold process emulsifier offering excellent performance, natural dermollient functionality and superior sensoriality. Drawing from Hallstar's deep expertise in olive oil chemistry, Olivem[®] 2020 has a unique composition of fatty acids similar to the lipidic composition of the hydrolipidic film of the skin and the ability to preserve liquid crystals structures. As our clinical test demonstrates, these biomimetic properties sustain skin hydration. Olivem[®] 2020 allows preparation of formulations without the added heat or high shear mixing usually required to create oil-in-water emulsions. Ideal for a range of applications including face, eye and body care, sun care, make up, men's grooming, color cosmetics and hair care.

- Global regulatory compliance
- Excellent emulsification performance
- Biomimetic olive oil-derived ingredient
- Superior sensoriality and hydration, compared with other cold process emulsifiers
- Environmentally friendly—no added heat or pressure and contains over 60% naturally-derived ingredients according to ISO 16128



HYDRATION DATA

Olivem[®] 2020 Skin Hydration Compared to Market Alternatives



All statistical differences are at least significant

Graphic demonstrates that Olivem[®] 2020 provides a hydration benefit to the skin that is dramatically superior to the other products.

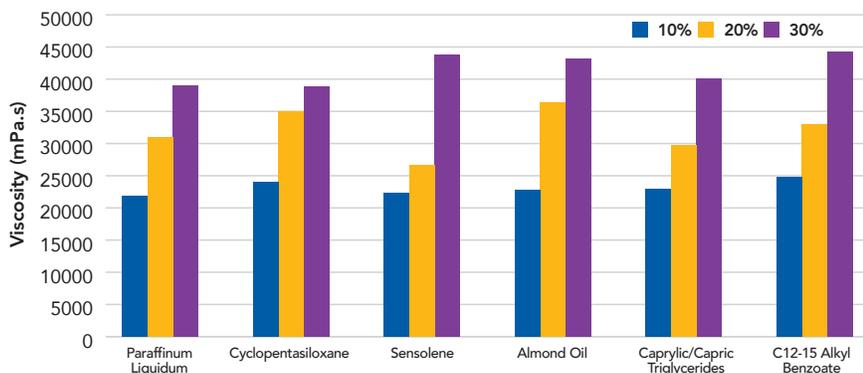
Thanks to the fatty acids from olive oil, Olivem[®] 2020 is a functional ingredient that gives a superior skin benefit when compared to market alternatives with a non-biomimetic oil phase. The clinical test was developed with 12 volunteers, and the skin hydration was measured by MoistureMeterSC[®]—Delfin. The measurements were taken prior to the product's application (T0 – baseline) and then 1h (T1h), 3h (T3h) and 6h (T6h) after the product's application. The graphic shows the difference of T0 and successive times for each formulation. The applied statistical criteria is the two-tailed, student test for unpaired data.

LET'S WORK WONDERS[®]



VERSATILE EMULSIFIER FOR OIL PHASES

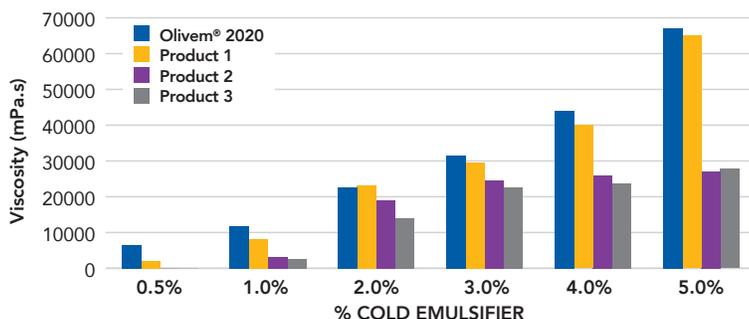
Performance 2% Olivem® 2020 with 10%, 20% and 30% of Oil Phase



Olivem® 2020 can emulsify very different types of oil, from apolar hydrocarbons to silicones, esters, natural oils and triglycerides to polar esters. It can also emulsify up to 30% of the oil phase with only 2% of the ingredient to create rich and nourishing textures. Olivem® 2020 can be added in any phase and at any time in the formulation development process.

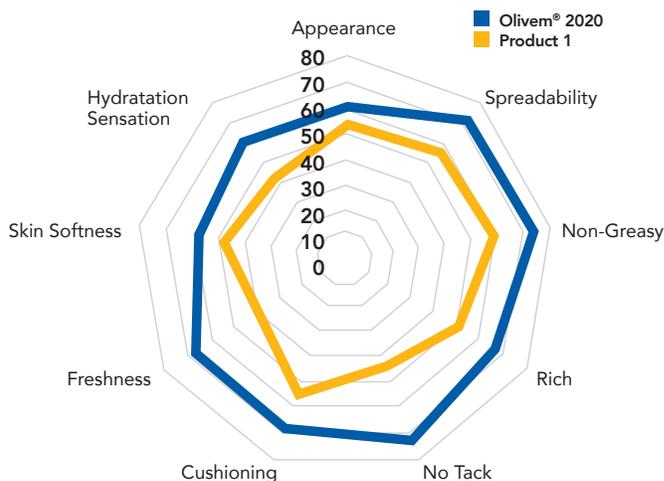
EFFICIENT VISCOSITY BUILDING FOR WATER GELS

Water Gel Performance



Olivem® 2020 can build water gels very efficiently compared to market alternatives while giving naturality and enhanced benefits for skin.

SENSORY DATA



Olivem® 2020 was compared to a market alternative using an untrained panel for various sensorial parameters. This chart shows a superior appreciation on all parameters tested, with freshness, cushioning, hydration and lack of tackiness as the most noticeable differences.

TECHNICAL DATA

- INCI: Ethylhexyl Olivate (and) Sodium Acrylates Copolymer (and) Polyglyceryl-4 Olivate
- Aspect: Viscous yellow liquid
- pH 2% in water @ 25°C±2°C: 5.5-7.5
- Viscosity 2% in water (Brookfield DV-E, s6, 25°C±2°C, 20 rpm): 10000-30000 mPa.s