

Lipo-QUEST BG

Unique chelating agent for oil phase

INCI: Butylene glycol, Lauric acid, Lauryl alcohol diphosphonic acid

Chelating agents are used in almost all types of personal care formulations for increased effectiveness and improved stability. The use of these agents increases consumer acceptance. The **chelation** mechanism, described as a chelate complex, is based on multiple bonds (multidentate ligand) around a single central atom. Nowadays, the chelating agents on the market are almost **exclusively water-soluble**.

However, with the exponential growth of **waterfree and waterless** products, especially in toiletries, there is a real need for **fat-soluble chelating** agents. **Lipo-QUEST BG** meets exactly this need, because it is an exclusive blend, with a natural index of over 0.85 (ISO 16128 standard).

Advantages at a glance

Oils and
anhydrous
formulations

Against rancidity

- Protection of easily oxidized components
- Inhibition of odor formation

Fragrances

Flavonoids & enolates

- Protection from fading
- Prolongation of the smell of fragrances

Emulsions

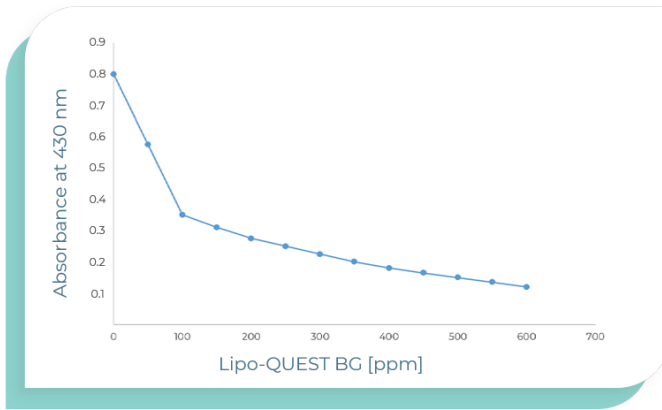
Prevent coloration/discoloration

- Improve stability of lipophilic ingredients : vitamins, essential oils, UV filters, fatty acids.

Lipo-QUEST BG is ideal for use in trendy solid body care, both in rinse-off, as well as in leave-on products and provides a real solution to prevent rancidity, softening, brown spots, cracking and discoloration caused by metal ions.

Furthermore, Lipo-QUEST BG serves to improve foaming and wash-off. In fact, tests have proven that Lipo-QUEST BG is particularly selective towards problematic transition metals such as Cu and Fe compared to Ca and Mg.

Performance chelating capacity :



In presence of high stress conditions (Fe^{3+} , air and high temperature) the addition of 0.1% of Lipo-QUEST is enough to lower oxidative degradation by more than 50 %.

The addition of 0.4 % of Lipo-QUEST reduces the oxidative action of iron ions by more than 80 %.

Test: Soybean oil at 90°C in contact with air flow rate 10 L/h. The intentional addition of 5 ppm of Fe^{3+} .

Benefits in Suncare:

- Avobenzone is oil soluble UV-filter
- Degradation by-products of Avobenzone are red-pink colored.

Basic emulsion intentionally polluted with ferric chloride



Without Lipo-QUEST BG With 0.5 % Lipo-QUEST BG

Lipo-QUEST BG reduces Avobenzone degradation caused by Fe^{3+} ions
 → emulsion remains whiter

Formulation example

Base for Monoi massage candle, pleasant and fragrant glide

Phase	Product / INCI Name	% (w/w)
A	Cocos nucifera oil	6.0
	Marula oil / Sclerocarya birrea seed oil ¹	9.0
	Hydrogenated soybean oil	48.0
	Shea butter refined / Butyrospermum parkii butter ¹	14.0
	Citrolatum® C/ Polycitronellol, Euphorbia cerifera (Candelilla) wax ²	14.0
	Kalahari melon seed oil / Citrullus lanatus (Watermelon) seed oil ¹	7.0
B	Lipo-QUEST BG / Butylene glycol, Lauric acid, Lauryl alcohol diphosphonic acid ¹	1.0
	Citropol® F / Polycitronellol ²	1.0
	Fragrance monoi	1.0

Suppliers: ¹Connect Chemicals
² P2 Science distributed by Connect Chemicals

Use of the ingredient :

Lipo-QUEST BG can be added at any step of the process in the lipidic phase. It fights effectively against the premature rancidity of fats even when they are repeatedly heated as in this massage candle formulation guideline.

Application

- Raw material shelf-life
- Fragrance & essential oil
- Anhydrous formulation
- Emulsion O/W and W/O