



Viscosity, Flow behaviour and Gelling strength

Raw Material

VIDOGUM LS 35 consists of native locust bean gum (E410) and neutral flavour guar gum (E412). Locust bean gum is extracted from the endosperm of the wild tree 'Ceratonia siliqua L.'.

Origin: Mediterranean countries.

Guar gum is extracted from the endosperm of the bush 'Cyamopsis tetragonoloba L.', cultivated in India and Pakistan.

Production

Separation of the endosperm, wet milling, drying, sifting, standardisation.

Characteristics

VIDOGUM LS 35 is only suitable for products that pass through a heating process.

VIDOGUM LS 35 demonstrates a similar viscosity as **VIDOGUM L 150 – 175**.

VIDOGUM LS 35 is primarily used in dairy products for which a full-bodied taste is required.

VIDOGUM LS 35 demonstrates a creamy mouth-feel and behaves considerably less pseudo-plastic than native guar gum. Mouth-feel comparison:

VIDOGUM GH: slimy ↔ **VIDOGUM SP**: full-bodied ↔ **VIDOGUM LS 35**: creamy, full-bodied.

Its creaminess is close to that of native locust bean gum, although it has increased full-body taste as an additional benefit. Due to this unique mouth-feel, **VIDOGUM LS 35** is suitable for quark based spreads and quark desserts.

VIDOGUM LS 35 strengthens the gel network of agar-agar and k-Carrageenan. As a result, the gel structure becomes considerably more elastic with the addition of **VIDOGUM LS 35**.

The gelling optimum in aqueous solutions of k-Carrageenan and **VIDOGUM LS 35** is achieved at a ratio of 70: 30.

Compared with **VIDOGUM L**, a reduced gel strength is observed but combined with a specific texture.

Benefits

- Synergy with k-Carrageenan & agar-agar → strengthening of gel network → cost reduction.
- Synergistic viscosity increase if combined with native and modified starches.
- Syneresis reduction, of particular importance, when using k-Carrageenan.
- Increase of elasticity of the k-Carrageenan gel networks → improved spreadability.
- The superior protective colloid effect is particularly important due to the increased cold viscosity with a fat content of < 27 %. At higher fat concentrations, the protective colloid effect of the milk fat is usually sufficient.
- Not suitable for cold processes, without heating step.
- Not suitable for freeze/thaw stability.
- Full-bodied mouth-feel is particularly well suited for fruit quark and dairy-based spreads.
- Good aroma release.
- Good taste neutrality.

Areas of use

Product Group	Dosage [%]	Benefits in final product using a selected example
Dairy and dessert products	0.2 – 0.4	<p>Thermally processed quark desserts and cream cheese – used either alone or in combination with k-Carrageenan or gelatine:</p> <ul style="list-style-type: none"> • Protects milk protein from sandiness during the heating due to the specific solubility characteristics → higher process security, improved quality (protective colloid effect). • Creamy mouth-feel, better melting action. • Improved spreadability. • Can form a firm, spoon-able and elastic structure when used with k-Carrageenan. • Good aroma release. • Good taste-neutrality. • Syneresis prevention in comparison with pure k-Carrageenan. • As a rule, an addition before fermentation requires a fat content > 14% and use of additional hydrocolloids as stabilisers (e.g. pectin, agar-agar).
Organic products		<p>VIDOGUM LS 35 (conventional Locust bean gum and Guar gum) may be used for the production of organic products within the “legal framework”.</p>