FOOD VIDOGUM GH®

(native guar gum, neutral flavour)

Raw Material

VIDOGUM GH (Guar Gum E412) is extracted from the endosperm of the 'Cyamopsis tetragonoloba L.' bush cultivated rurally.
The active chain-like hydrocolloid molecules belong to the Galactomannan group.
Origin: Pakistan, India.

Production

Separation of the endosperm, hot-water extraction, drying, milling, sifting.

Characteristics

VIDOGUM GH is available in three qualities:
VIDOGUM GH 150: Coarse quality. Particularly used in products where delayed swelling is desired, or where lumps would otherwise result.
VIDOGUM GH 175 and GH 200: Fine - very fine particle size. The majority of applications is covered by these two qualities. Improved cold solubility and higher hot viscosity.
VIDOGUM GH 200: is suitable for both hot and cold processes, but not for cold-soluble Instant products that are not subject to strong shearing.

VIDOGUM GH features a slimy mouth-feel.

Viscosity and Flow behaviour

VIDOGUM GH: slimy <-> **VIDOGUM SP**: full bodied <-> **VIDOGUM L**: creamy.

The sliminess is particularly apparent at higher dosages (> 0.1-0.2 %), whereby VIDOGUM GH can be used in many products without noticeable impairment.
In some applications, however, a pseudo-plastic consistency is expressly desired:

- Products that already have a slimy consistency by nature, for example, mousse products
- Whipped milk desserts
- Shakes
- Sorbets

VIDOGUM GH has, without doubt, very high taste neutrality and therefore is especially suited for taste-sensitive products (dairy desserts, spreads, fruit preparations).

VIDOGUM GH should be combined with other types if:

- The gelling structure should be supported or increased → alternative: VIDOGUM SP, L, KJ
- Syneresis cannot be eliminated due to dosage limitation → alternative: VIDOCREM
- The increasing slimy mouth-feel presents a problem at dosages > 0.1-0.2% → alternative: VIDOGUM L, SP VIDOCREM.

VIDOGUM GH should not be used if:

- A very good aroma release is required particularly in cold consumed products → alternative: VIDOGUM L, SP, VIDOCREM
- For cold-soluble instant products not subject to heavy shearing → alternative: VIDOCREM
- For creamy full-bodied mouthfeel in fat-reduced products → alternative: VIDOCREM, VIDOGUM SP SYN.
- If thickening is expected for > 40% saccharose solutions → alternative: VIDOGUM SP, VIDOGUM L, VIDOCREM

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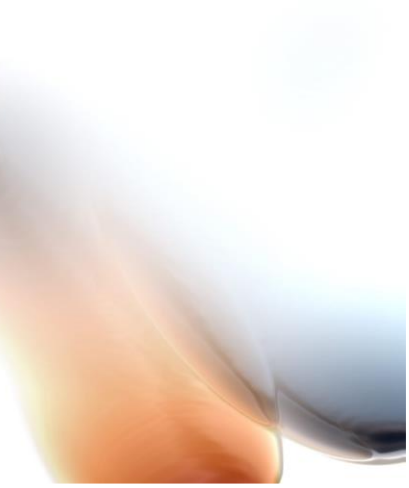

Benefits

- **Absolutely neutral in taste** thanks to the hot water extraction process.
- White colour – no impairment of the colour of the product.
- Suitable for cold and hot applications.
- Synergistic viscosity increase, together with native starches and xanthan.
- Strongly liquefies during stirring due to its pseudo-plastic characteristics → simple dispensing.
- Freeze - thaw stable → suitable for deep freeze products.
- Dissolves with light dispersion in solution of 50° Brix without increasing the viscosity thereby. The dispersed particles then dissolve again after re-dilution, through which the viscosity can be build up. “Carry-Over effect”.
- Maintains its viscosity at approx. 65% at a temperature of 75° C compared to room temperature (reversible viscosity loss). As a result, **VIDOGUM GH** is especially well suited for applications in which the highest possible viscosity is required in the hot area.
    - High viscosity when eaten hot.
    - Stabilisation during process temperature (pasteurisation, sterilisation).
    - Already provides sufficient viscosity at hot filling temperatures → reduces splashing → filling machines can be set to higher speed.

Applications

Product Group	Dosage [%]	Benefits in final product using a selected example
Dairy and dessert products	0.2 – 0.4	Dairy products, dairy desserts, fruit quark – together with gelatine or modified starch: • Viscosity increase. • Outstanding taste neutrality • White colour → white mass does not develop any yellowing (unlike VIDOGUM GI) • Improved whipping characteristics for foamed products (pseudo-plastic flow behaviour) • Syneresis prevention, however, necessary dosage is limited by the viscosity • As a rule, addition before fermentation requires a fat content > 14%, and the use of additional stabilisers (e.g. pectin, agar-agar).
Fruit products and soft drinks	0.2 – 0.5 0.7 – 1.2	Fruit preparations for yoghurt (addition at the start of the process at 40°Brix). • Thickening in combination with modified starch • High taste neutrality • Especially suitable for yoghurts Fruit preparations for yoghurts (addition at the end of the process ≥ 50° Brix – carry over to white mass). • Dispersed guar gum thickens the white mass after mixing • Especially suitable for stirred yoghurts in the low-price sector with low SS content • High taste neutrality
Culinary products	0.1 – 0.5	Light, taste-neutral sauces such as, Sauce Bechamel in combination with xanthan and VIDOGUM SP-SYN • Viscosity increase • Only limited suitability for fat reduced products • High taste neutrality • Provides very thick texture at hot consumption temperatures.
Organic products		**VIDOGUM GH** (conventional guar gum) may be used for the production of organic products within the framework of the current EU directives.
Dietary and pharmaceutical products		Taste neutral guar gum is used: • To increase viscosity • For gluten free bread • To increase the feeling of satiety • To reduce the cholesterol content (may not be permitted to advertise in some countries) Compared with VIDOGUM G 200 I, **VIDOGUM GH** features lower microbiological values.

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