



# VIDOGUM GH

(native tasteless guar gum)

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### Raw materials

VIDOGUM GH (guar gum E 412) is extracted from the endosperm of the bush "Cyamopsis tetragonoloba L.". Unlike locust bean and tara gum, this is cultivated rurally. The active chain-shaped hydrocolloidal molecules belong to the Galactomannan group. Origin: India, Pakistan.

### Production

Separation of the endosperms, hot water extraction, drying, milling, sifting.

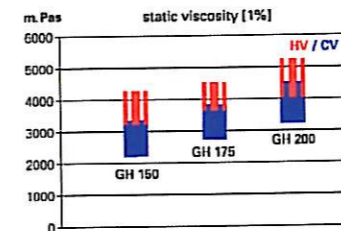
### Characteristics

VIDOGUM GH is available in three qualities:

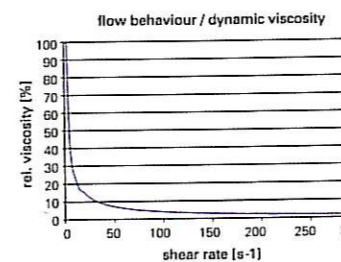
VIDOGUM GH 150: coarse quality – is used in particular for products for which a delayed swelling is desired, or where lumps would otherwise result.

VIDOGUM GH 175 and GH 200: Fine – very fine quality – the majority of the applications are covered by this quality, which, in addition to an improved cold solubility, also shows a higher hot viscosity.

VIDOGUM GH 200 is suitable for both hot and cold processes, but not for cold-soluble instant products that are not subjected to strong shearing.



Viscosity



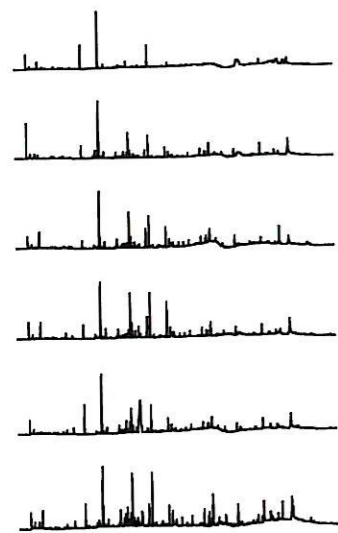
Flow behaviour

VIDOGUM GH features a slimy mouth-feel.

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 with many products without any 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



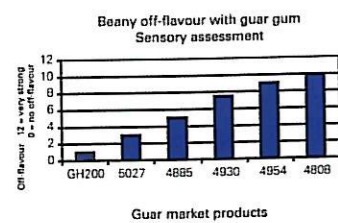
GC detection of the Off-Flavour

- VIDOGUM GH 200
- Guar gum Market sample 5027
- Guar gum Market sample 4885
- Guar gum Market sample 4930
- Guar gum Market sample 4954
- Guar gum Market sample 4808

The gas chromatographic analysis clearly shows that VIDOGUM GH 200 has considerably fewer peaks than guar gum from our competitors.

VIDOGUM GH demonstrates without doubt the highest taste neutrality:

- VIDOGUM GH is specially suited for taste-sensitive products (dairy desserts, spreads, fruit preparations)
- On the basis of its high quality, VIDOGUM GH can be blended with VIDOGUM G 200I so that a specific optimum between price and performance can be found for the involved product.



Sensory Panel

- 6 specialists
- Test object
  - Pudding
  - Natural yoghurt

The results of the sensory panel agreed completely with the results of the GC analysis.

### APPLICATION AREAS



- Dairy and dessert products
- Fruit products and soft drinks
- Culinary products
- Meat products
- Organic products
- Dietary and pharmaceutical products
- Your product



### Areas of use

VIDOGUM GH is used in many different applications. The characteristics, benefits and application possibilities listed here can thereby only represent a selection.

### Characteristics and benefits






- Absolute taste-neutrality thanks to the hot water extraction process
- White flour colour – no impairment of the colour of the product
- Suitable for cold and hot applications
- Synergetic viscosity increase together with native and modified starches, as well as xanthan
- Strongly liquefies during stirring due to its pseudo-plastic characteristics -> simple dispensing
- Stable for freezing and defrosting -> suitable for deep-freeze products
- Dissolves with light dispersion in solutions with 50° brix without thereby increasing the viscosity. The dispersed particles then dissolve again after redilution, through which the viscosity can be built 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 temperatures (pasteurisation, sterilisation)
  - Already provides sufficient viscosity at hot filling temperatures -> reduces "splashing" -> filling machines can be set to a higher speed.

### VIDOGUM GH should not be used if:

- A very good aroma release is required – this must be observed in particular for products that are consumed cold -> alternative: VIDOGUM L, SP, VIDOCREM
- In case of cold-soluble Instant products that will not be subjected to heavy shearing -> alternative: VIDOCREM
- If a creamy and full-bodied mouth-feel is expected from fat-reduced products -> alternative: VIDOCREM/VIDOGUM SP-SYN
- If thickening is expected for > 40% saccharose solutions -> alternative: VIDOGUM SP, L, VIDOCREM.

### VIDOGUM GH should be combined with other types if:

- The gelling structures should be supported or increased -> alternative: VIDOGUM SP, L, KJ
- The syneresis (in many cases, insufficient dosage can be carried out due to the viscosity limitations) cannot be eliminated -> alternative VIDOCREM
- The increasing slimy mouth-feel presents a problem at dosages > 0.10 – 0.2% -> alternative VIDOGUM L, SP, VIDOCREM

Product Group	Dosage [%]	Benefits in final product using a selected example
 <p>Dairy and dessert products</p>	0.2 – 0.4	Dairy products, dairy desserts, fruit quark – together with gelatine or modified starch: <ul style="list-style-type: none"> <li>• Increase of viscosity</li> <li>• Outstanding taste neutrality</li> <li>• White colour -&gt; white mass does not develop any yellowing (unlike VIDOGUM GI)</li> <li>• Improved whipping characteristics for foamed products (pseudo-plastic flow behaviour)</li> <li>• Syneresis prevention, necessary dosage is limited by the viscosity, however</li> <li>• As a rule, an addition before fermentation requires the following conditions: fat content: &gt; 14%; the use of additional hydrocolloids as stabilisers (e.g., pectin, agar-agar)</li> </ul>
 <p>Fruit products and soft drinks</p>	0.2 – 0.5	Fruit preparations for yoghurts (addition at the start of the process at 40° brix) <ul style="list-style-type: none"> <li>• Thickening in combination with modified starch</li> <li>• High taste neutrality</li> <li>• Specially suited for yoghurts</li> </ul>
	0.7 – 1.2	Fruit preparations for yoghurts (addition at the end of the process at at least 50° brix – Carry Over to white mass) <ul style="list-style-type: none"> <li>• Dispersed guar gum thickens the white mass after the mixing</li> <li>• Specially suitable for stirred yoghurts in the low price sector with low TS content</li> <li>• High taste neutrality</li> </ul>
 <p>Culinary products</p>	0.1 – 0.5	Light, taste-neutral sauces such as, for example, Sauce Bechamel, e.g., in combination with xanthan and VIDOGUM SP-SYN <ul style="list-style-type: none"> <li>• Increase of viscosity</li> <li>• Only limited suitability for fat-reduced products</li> <li>• High taste neutrality</li> <li>• Provides very thick texture at hot consumption temperatures</li> </ul>
 <p>Organic products</p>		VIDOGUM GH (conventional guar gum) may be used for the production of organic products within the framework of the current EU directives.
 <p>Dietary and pharmaceutical products</p>		Tasteless guar gum is used: <ul style="list-style-type: none"> <li>• To increase viscosity</li> <li>• For gluten free bread</li> <li>• To increase the feeling of satiation</li> <li>• To reduce the cholesterol content (may not be advertised in some countries)</li> </ul> <p>In comparison to VIDOGUM G 200 I, VIDOGUM GH features a higher micro-biological purity</p>