

norevo®

19/09/2023

# Introduction Gum Acacia



:always natural

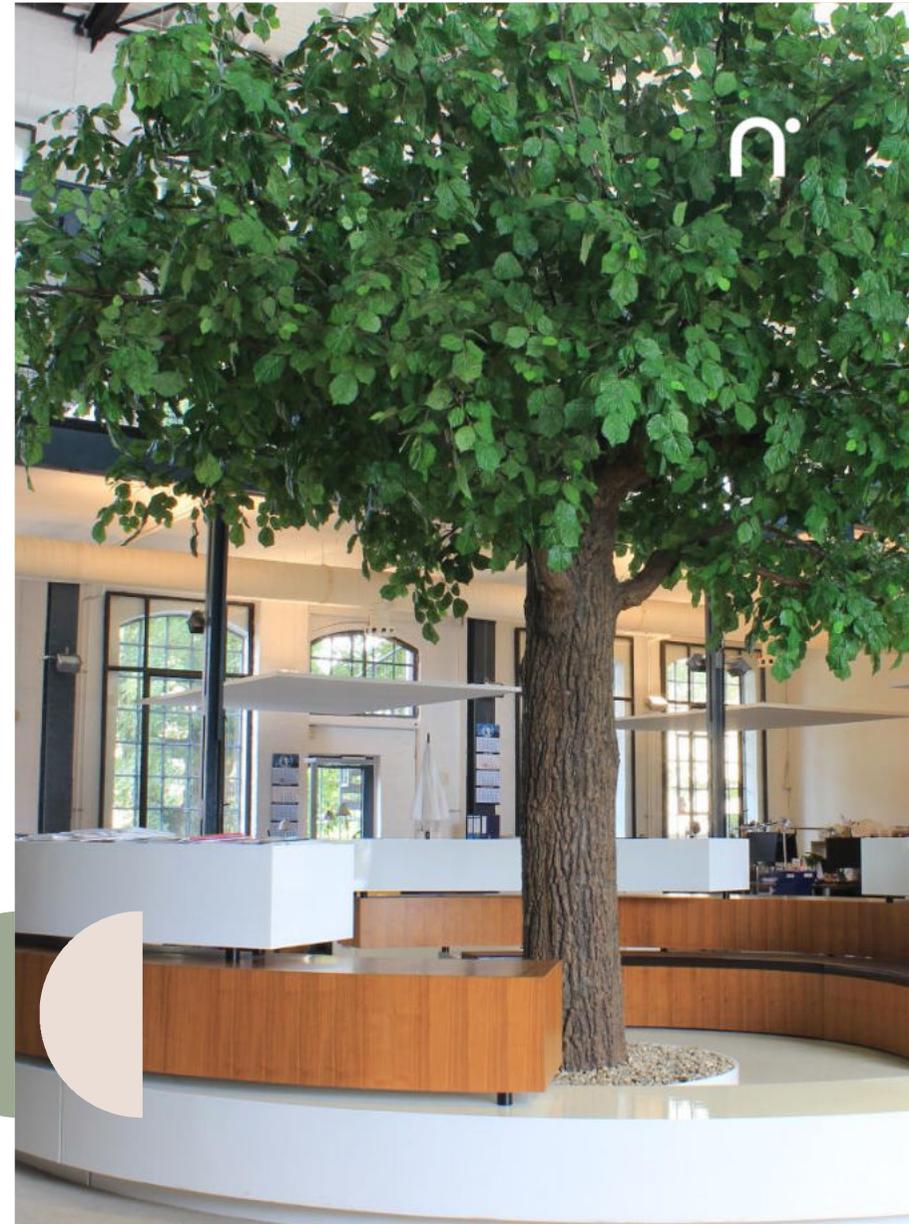
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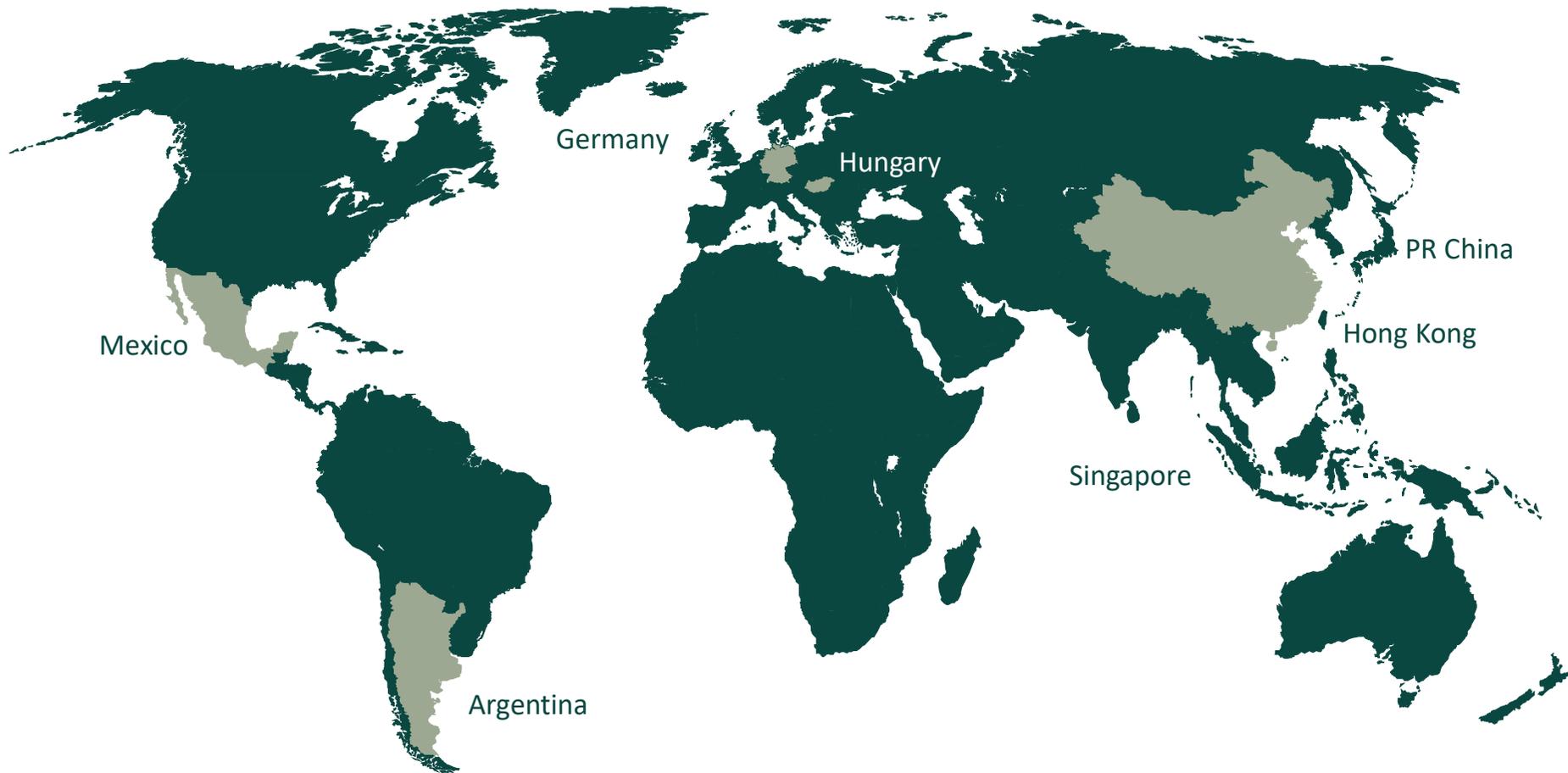
# Facts Around Norevo

We are a medium-sized, internationally acting supplier, specialized in sourcing and processing of natural raw materials.

- ▮▮ Privately owned and independent
- ▮▮ 210 employees worldwide from 18 nations
- ▮▮ In-house laboratory for research & development and product analysis
- ▮▮ Natural ingredients from our 5 product groups are sold in 79 countries
- ▮▮ 5 production facilities worldwide



# Norevo International Company Group





# Certified Quality

Quality and purity of our products meet the highest standards. This is secured by five in-house laboratories and four research and development centers.

Norevo is certified by the following standards:

Proud to be a  
**Sedex**  
Member



HONEY & AGAVE

# Naturally Norevo

Nature is our most important supplier. It is in our best interest to invest in a future in which the environment, economy and social responsibility are in a state of harmony and balance.

Our objective is

- » Increase transparency throughout the entire supply chain
- » Improve living standards in the countries where we source our raw materials
- » Protect our planet, thereby minimising the impact of climate change on our environment

More activities and information in our sustainability brochure



# Our Product Range



Honey/Bee-Products



Gum Acacia



Agar Agar



Licorice Extract



Agave Syrup



Confectionery Performers



Waxes



Hydrogenated Oils

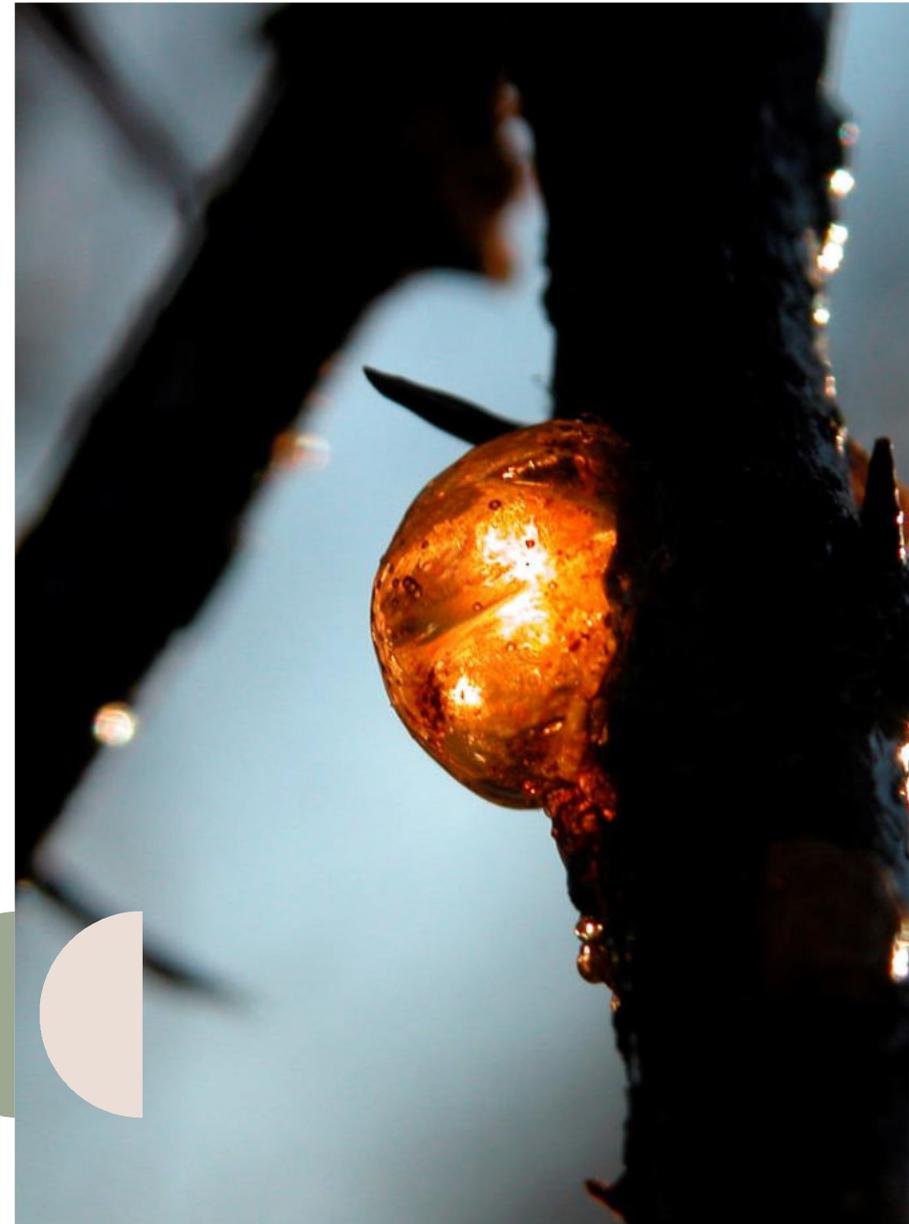
# Gum Acacia



# Norevo Gum Acacia

## Definition

- ▮▮ Gummi Acacia is the natural exudate of the acacia tree
- ▮▮ Known as a natural gum for more than 4,000 years
- ▮▮ Over 2,000 different acacia tree species; however, only 2 types provide a resin with specific functions for the industry:
  - Acacia Senegal
  - Acacia Seyal



# Gum Acacia - Origin

- » Gum Acacia comes from the Central African "rubber or gum belt", which extends from Senegal to Ethiopia.
- » The main supplying countries are Sudan, Chad and Nigeria.



# Gum Acacia – Production Möhnsen/Germany



## Advantages

- ▶▶ State of the art roller-drying production unit
- ▶▶ Gentle drying
- ▶▶ Better emulsifying ability
- ▶▶ Flexible/individual better solution properties



# Gum Acacia – Production Sudan



## Advantages

- ▶▶ Daily capacity for spray-dried finished product: 7 mt
- ▶▶ ISO certified
- ▶▶ Commercial operation since 2002
- ▶▶ Alfa Laval equipment
- ▶▶ Continuous monitoring of Norevo's production manager
- ▶▶ Quality control by Norevo Lab.



# Gum Acacia – Harvest

- ▶▶ Harvest season: from October to April (dry season)
- ▶▶ Starts with the tapping of the acacia trees, the resin comes out in the form of "tears"
- ▶▶ Manual harvest
- ▶▶ Pickers collect lumps and sell on the market in their village
- ▶▶ Gum Acacia is sold as a raw material locally for further processing (drying, cleaning, grading)



# Properties of different varieties



## Comparison Acacia senegal – Acacia seyal

Criteria	Acacia Senegal	Acacia Seyal
Appearance of raw material	Amber-colored tears/pieces	dark amber-colored granules
Optical rotation	negative optical rotation	positive optical rotation
Viscosity (solution of 25, at 25°C)	between 60 and 180 cps	between 30 and 100 cps
Colour of solution	light and clear	dark brown and clear

# Norevo Gum Acacia Qualities



Quick Gum  
Highly purified gum acacia powder qualities, instantly soluble, standardized, homogenized



Gum Acacia Pieces  
Raw in pieces - Acacia senegal und Acacia seyal



Mechanical powder / granules  
Ground / granulated gum acacia with quicker solubility

# Gum Acacia - Benefits

- ▶▶ Tooth friendly food ingredient
- ▶▶ Can be used for calorie-reduction or fibre-enrichment
- ▶▶ Low caloric
- ▶▶ Neutral in taste and smell
- ▶▶ Stable even in acidic environments



# Gum Acacia - Certifications



- ▮▮ Norevo qualities comply with Food additive regulation E 414 in Europe and FCC in USA, European and US Pharmacopeia requirements, amongst others.
- ▮▮ GMO free, Kosher and Halal certified
- ▮▮ Organic qualities available
- ▮▮ Has pre-biotic effects but no EU – health claim



# Gum Acacia – Applications



Confectionery Industry  
Traditional ingredient for  
confectionery and chewing  
gum



Pharmaceutical / Cosmetics  
industry  
Coating agent, protective  
colloid, binder, stabilizer  
and natural adhesive



Beverage / Flavoring Industry  
Natural stabilizer and  
emulsifier, suspending  
agent, encapsulant for  
spray-dried aromas,  
stabilizer of aromatic  
emulsions



Technical applications  
Adhesives, binders,  
thickeners and suspending  
agents

# Gum Acacia – Applications

Confectionery Industry

- ▶▶ Texturizer for chewy candies and toffees
- ▶▶ Anti-crystallization agent for gums and pastilles
- ▶▶ Film former in coating applications as gumming or polishing agent and for the prevention of fat and acid migration
- ▶▶ Soft and hard sugar coating for panned products



# Gum Acacia - Applications



Pharmaceutical / Cosmetics industry

- ▶▶ Binder and natural adhesive for compressed tablets
- ▶▶ Emulsifier and stabilizer for emulsions and syrups
- ▶▶ Coating Agent for Pharmaceuticals
- ▶▶ Thickening agent and film former in protective creams
- ▶▶ Stabilizer in lotions
- ▶▶ Natural adhesive in blusher & mascara



# Gum Acacia - Applications

## Beverage and Flavour Industry

- ▶▶ Emulsifier and stabilizer for citrus oil emulsions in soft drinks
- ▶▶ Complexing agent and stabilizer in red wine
- ▶▶ Foam stabilizer in beer
- ▶▶ Carrier and encapsulant agent for spray- drying and microencapsulation applications of food colours or vitamins
- ▶▶ Bulking agent for diet powder
- ▶▶ Binder for bars
- ▶▶ Moisture binding in baked goods
- ▶▶ Fibre enrichment
- ▶▶ Reduction of nutritional value in food stuffs



# Gum Acacia - Applications

## Technical applications

- ▶▶ Suspending Agent for inks and paints
- ▶▶ Preparation of etching and plating solutions for printing industry (lithography)
- ▶▶ Carrier and Encapsulation agent for chemicals
- ▶▶ Thickening Agent for printing paste for textile decorations
- ▶▶ Binding Agent in fireworks

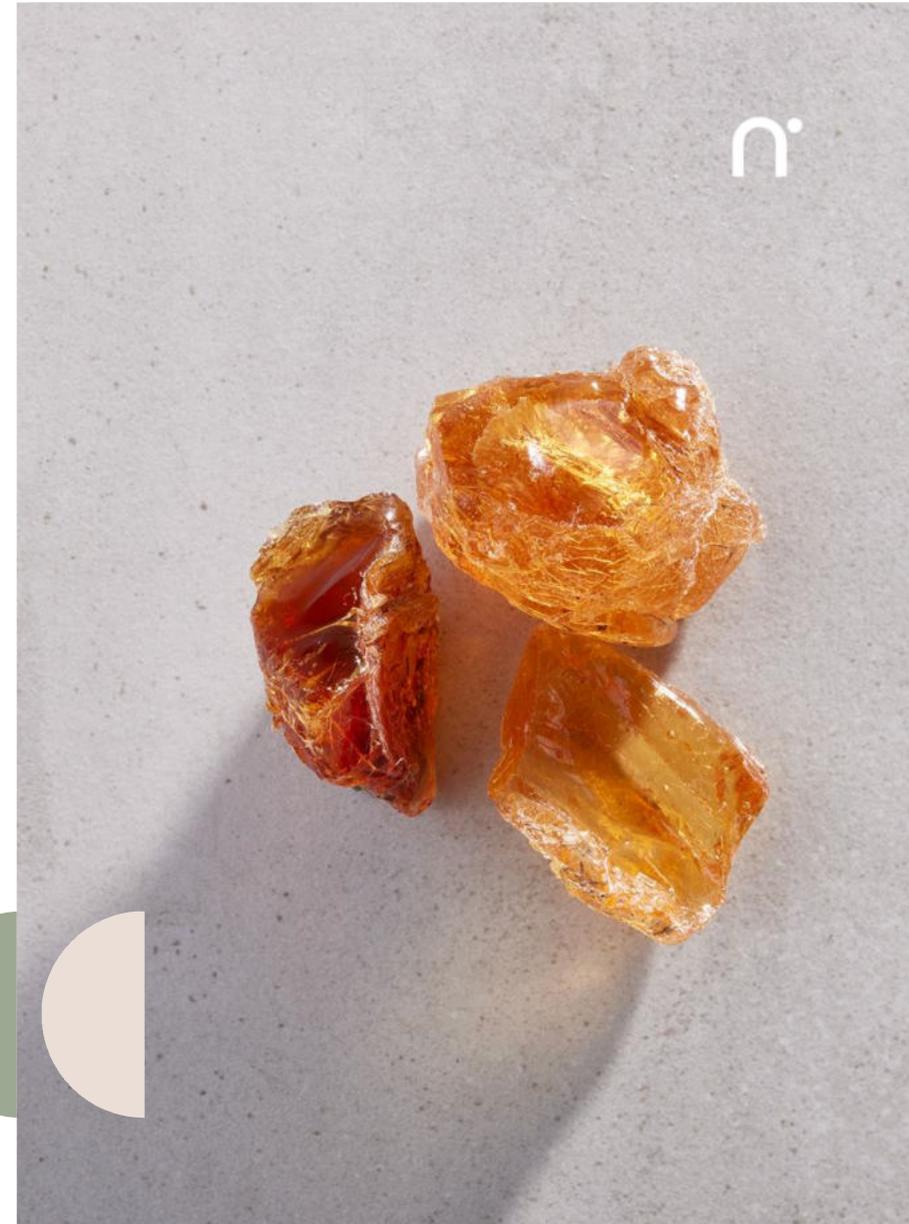


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# Gum Acacia Summary

- ▶▶ Gum Acacia comes from African, wild growing Acacia trees
- ▶▶ Gum Acacia is a complex and branched polysaccharide with a small amount of protein
- ▶▶ Gum Acacia has a fiber content of > 85%
- ▶▶ Gum Acacia is a natural, water- soluble hydrocolloid
- ▶▶ Gum Acacia has a completely neutral taste and smell
- ▶▶ Gum Acacia is low viscous and acid stable
- ▶▶ Gum Acacia is a low- calorie and tooth-friendly food ingredient
- ▶▶ Gum Acacia is GMO-free
- ▶▶ Gum Acacia's outstanding properties make it a perfect ingredient for numerous different applications



# Thank you!

norevo®



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