

ALLAND & ROBERT
Since 1884

WEBINAR - CONFECTIONERY



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AGENDA

1. THE COMPANY

2. WHAT IS ACACIA GUM?

3. MARKET OF CONFECTIONERY

4. ACACIA GUM FOR TEXTURE

a. TRADITIONAL GUMS AND PASTILLES

b. SUGAR FREE GUM DROPS

5. ACACIA GUM FOR GUMMING - COATING - POLISHING

a. TRADITIONAL COATING: SUGAR & CHOCOLATE

b. SUGAR FREE COATING

6. A&R : RESEARCH & DEVELOPMENT IN CONFECTIONERY

7. ACACIA GUM AND HEALTH

1. THE COMPANY

KEY FIGURES



1884

**Foundation
of the company**

6TH

**Generation
family company**

52

**Millions € TurnOver
estimation 2021**

KEY FIGURES

3

Factories

4

Spray drying
towers

120

Employees
in **2021**

70

Countries
we sell to

22,000 t
+
2,500 t

Production
capacity of
acacia gum

95%

Export

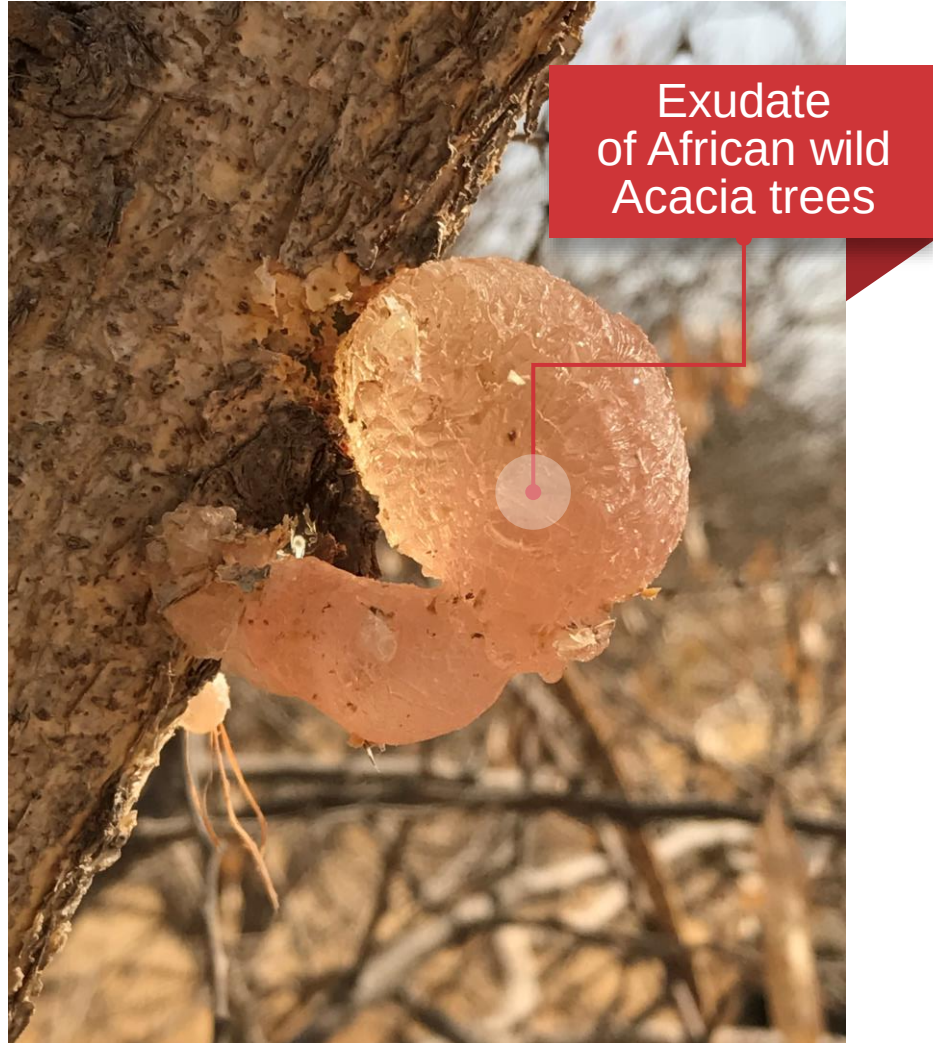


**Manufactured
in France & India**



2. WHAT IS ACACIA GUM?

A NATURAL RESOURCE



**World
production**

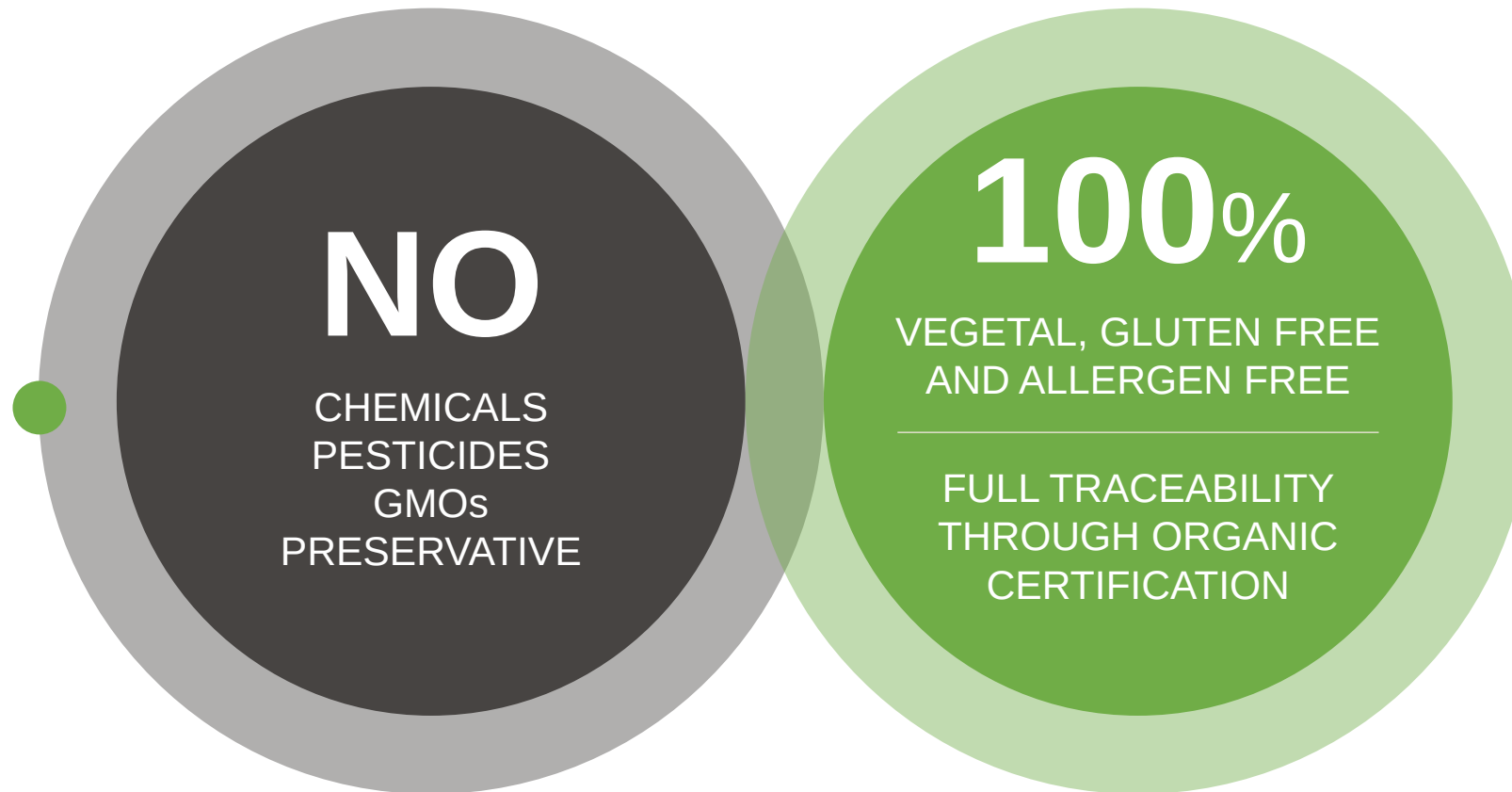
**65 000 MT
/year**

SOURCED SUSTAINABLY DIRECTLY FROM NATURE !



ALLAND & ROBERT

ENSURES THE **HIGHEST QUALITY** OF RAW MATERIAL



2. WHAT IS ACACIA GUM?

1. HIGH SAFETY INGREDIENT

E414

Arabic Gum

Acacia Gum

2. MULTI-FUNCTIONAL POLYSACCHARIDE

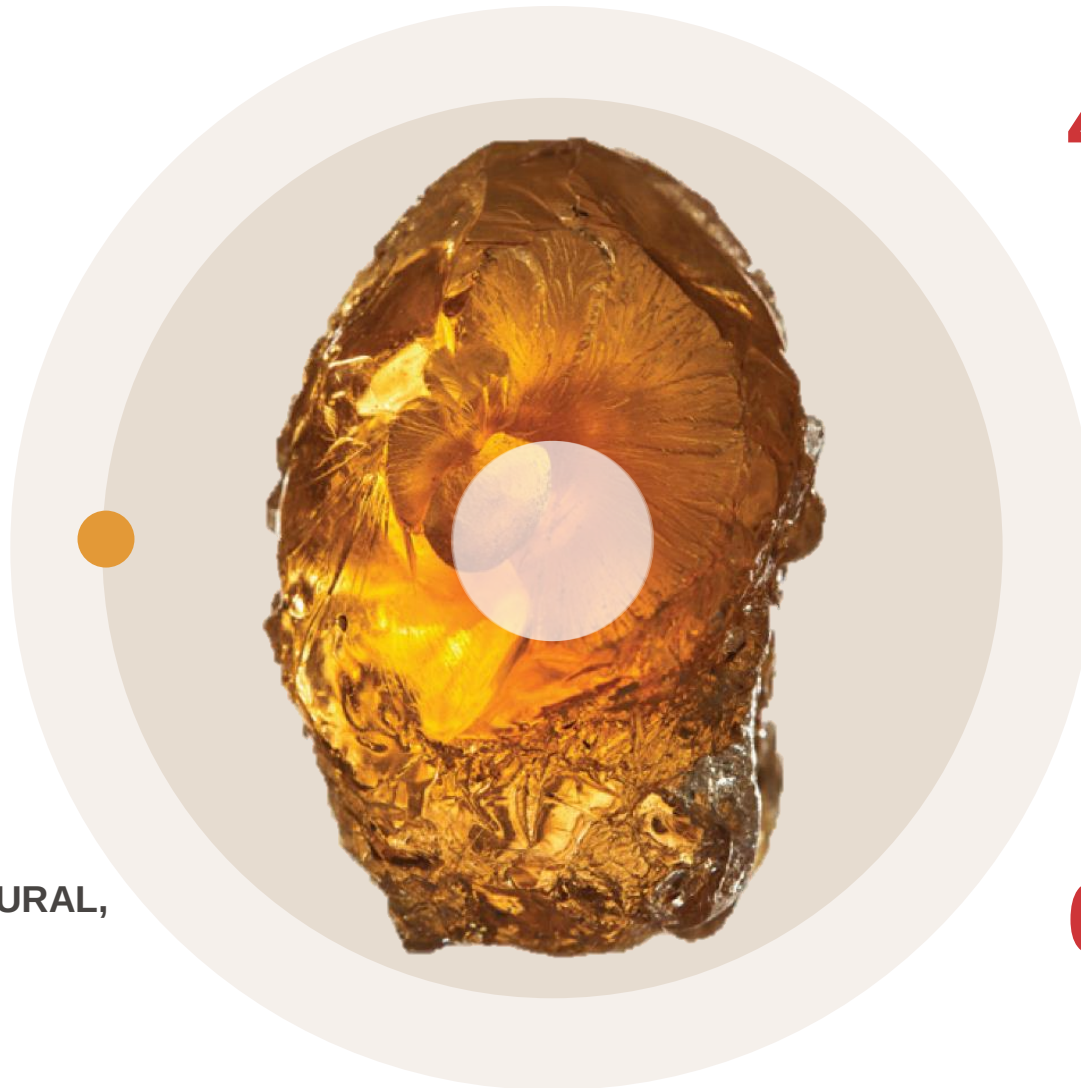
Rhamnose, Galactose,
Arabinose, Glucuronic
acids

3. VEGETAL, NATURAL, GMO FREE

4. ODOURLESS, TASTELESS, COLOURLESS

5. HIGHLY SOLUBLE IN WATER

6. LOW CALORIFIC VALUE (less than 2 kCal/g)



2. WHAT IS ACACIA GUM?

SENEGAL GUM

PROTEIN CONTENT

2%

LAEVOROTATORY OPTICAL
ROTATION

-20 to -35°

DIFFERENCES
IN FUNCTIONAL
PROPERTIES



SEYAL GUM

PROTEIN CONTENT

1%

DEXTROROTATORY OPTICAL
ROTATION

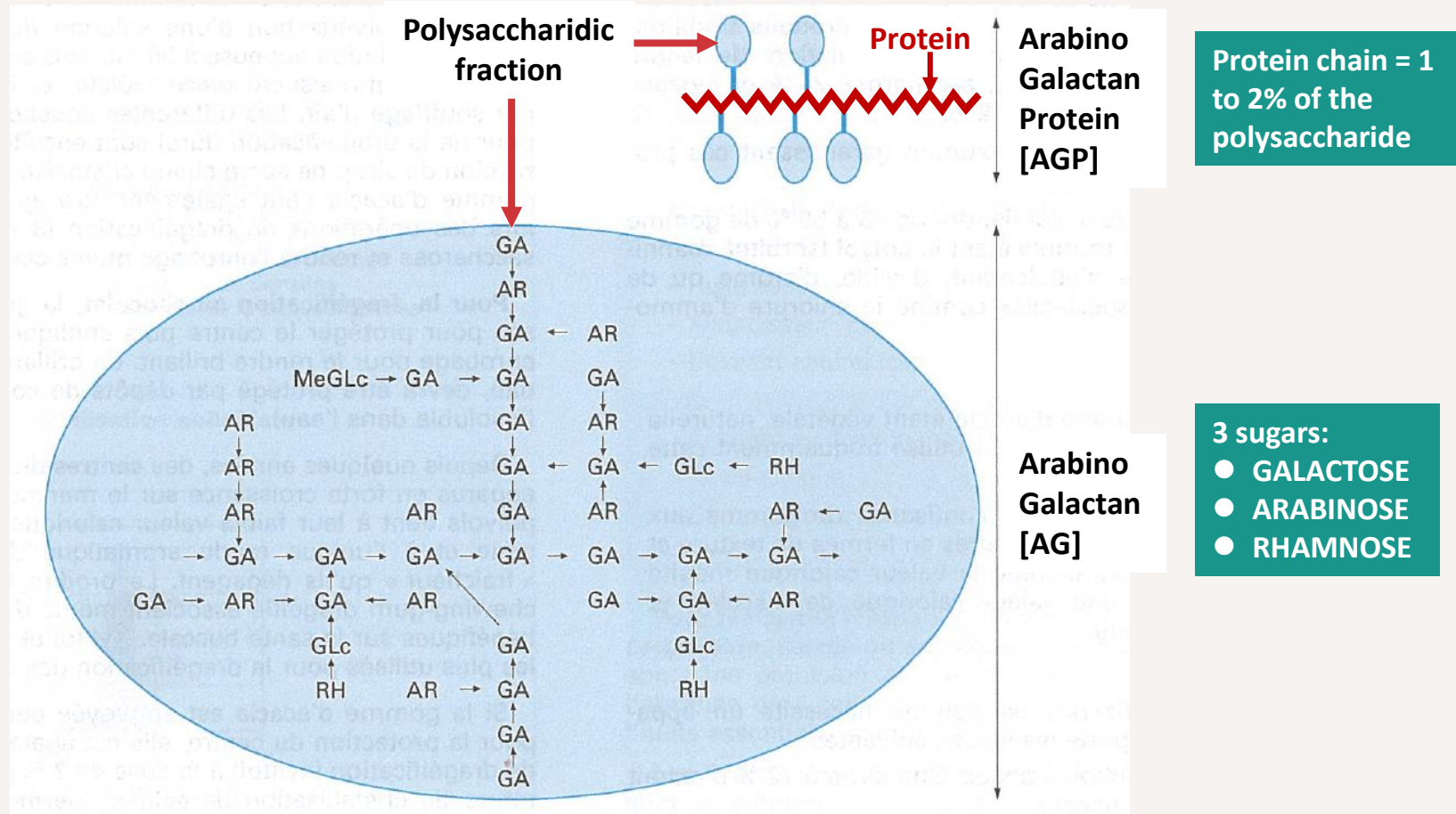
+35 to +60°



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ACACIA GUM CHEMICAL STRUCTURE



FUNCTIONAL PROPERTIES

OF ACACIA SENEGAL AND SEYAL



TEXTURING

Better textures and hardness



MOUTHFEEL IMPROVEMENT

Softening action and longer taste



NATURAL GLUE

Safe and organic food adhesive



EXTRUSION

Processing aid, gustatory sensation improver



EMULSION

Emulsifying properties and stabilization



FIBER ENRICHMENT

90% fiber content, highly soluble



COATING

Film forming abilities, perfect for gumming operations



ENCAPSULATION

Flavor retention, protection and use as a carrier

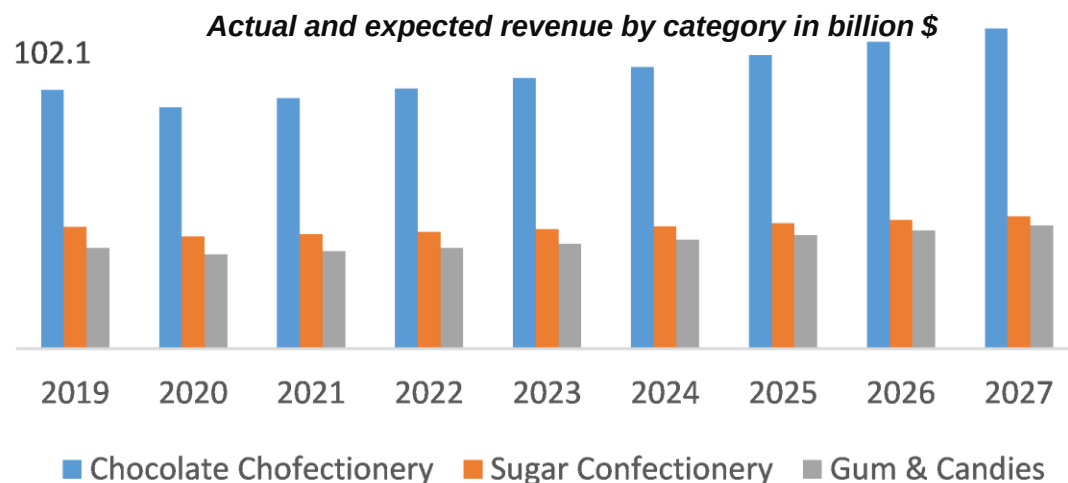
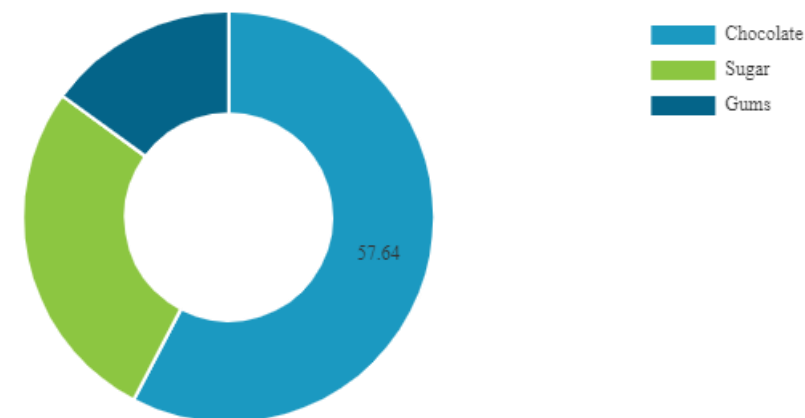
3. THE MARKET OF CONFECTIONERY

THE MARKET OF CONFECTIONERY

> **Confectionery market = chocolate, sugar and gums**
Dominated by the chocolate segment

> **A dynamic market**
Projected to grow from \$194.37 billion in 2021 to \$242.53 billion in 2028
CAGR of 3.8% in forecast period

Global Confectionery Market Share, By Type, 2020



Chocolate confectionery sub-segment

- > Leading category
- > Fastest growing market in the global market
- > Expected to register a revenue of \$126.5 billion during the forecast period.

Sources

<https://www.researchdive.com/8344/confectionery-market>

<https://www.fortunebusinessinsights.com/industry-reports/confectionery-market-100542>

- > **Confectionery is a (mental) health food**
Covid-19 pandemic influences consumer behaviors
Wellbeing – both physical and emotional – is a vital concern
Confectionery recognized as belonging to "feel good" category



- > **Sweet treats are highly popular products**
Over 7 in 10 European adults report eating sugar confectionery.



- > **Growing concern about sugar content**

68%
of UK adults would like to
see more reduced sugar
options from their favourite
brands



65%
of UK consumers say that
the sugar content of
sweets makes them worry
about how much of them
they eat



55%
of US consumers who have
cut back on chocolate in the
past year cite 'reducing
sugar intake' as a
reason

- > **Innovations opportunities for brands and market expansion**

Source: Mintel

Acacia Gum is totally in line with the trends

> Health and naturalness also a driving trend in confectionery

There are significant consumer expectations about:

Nutritional and functional aspect of food

- ✓ Calorie intake
- ✓ Positive impact on our organisms : vitamin, mineral and fibre

Treats in line with healthier lifestyles

Ingredients consumers are familiar with, that are recognized as natural

- ✓ Clean label
- ✓ Trust in food products

> Good for the planet too

Chewing gum initially made from chicle > switched to synthetic rubber in the 1960s.

Not biodegradable = harmful to the environment



23%

of Chinese consumers would pay more for sugar confectionery with health benefits

39%

of Brazilian consumers would pay more for chocolate with all natural ingredients

50%

of European consumers would be willing to pay more for biodegradable gum to reduce plastic pollution and protect the environment.

4. ACACIA GUM for TEXTURE

Thickening Agent

Influence on the **viscosity**, **body**, **texture** and **behavior** of the products



4. ACACIA GUM FOR TEXTURE



Avoids
crystallisation
of sucrose

Improves the
quality
of confectioneries



TEXTURING PROPERTIES

HERBAL or FRUIT CANDY

- Thickening agent **providing a unique texture** both firm and melting
- Combination of acacia gum/ sucrose/glucose: **specific texture**
- Increase fiber content
- Nice flavour release
- **Structure: Long**
Texture: Hard



RECIPE SHEET

Acacia gum SENEGAL	28 Kg
Sucrose	24 Kg
Glucose syrup 42DE	23 Kg
Water	23 Kg
Citric acid (50% sol.)	2 Kg
Flavors, colors	qs

MANUFACTURING PARAMETERS



- Flavors, colors and acids incorporated after cooking
- Deposit operation on starch trays
- Last coating with specific oil or fine sugar

ADDITIONAL INFORMATION

Dry matter after cooking	69° Bx
Time / ventilated room	40-60 hours
End moisture content	13 - 15%

TEXTURING PROPERTIES

HERBAL or FRUIT CANDY

- Thickening agent **providing a unique texture** both firm and melting
- Combination of acacia gum/ sucrose/glucose: **specific texture**
- Structure: **Long**
Texture: **Hard**



TEXTURING PROPERTIES

CHEWY CANDY

- Thickening agent **providing a unique texture** both chewy and melting
- **Combination of acacia gum/proteins or vegetable fats or emulsifiers : gelatin substitution**
- Increase fiber content
- Nice taste and texture



CHEWY SWEETS WITHOUT GELATINE



Assorted Fruit Toffees	Soft Fruit Toffees
Italy	Netherlands
Carrefour	Crest International, Netherlands
Carrefour	Cresti Plus
sugar, glucose syrup, vegetable fats in varying proportions (coconut fat, cocoa butter), dehydrated fruit pulp (dehydrated apricot pulp (1.6%), dehydrated banana pulp (1.6%), dehydrated strawberry pulp (1.6%), dehydrated mandarin pulp (1.6%)), thickener (arabic gum) , acidifier (citric acid), flavours, emulsifier (saccharose esters of fatty acids)	sugar, glucose syrup, vegetable oil (coconut oil), thickener (arabic gum) , acidifier (citric acid), flavours, salt



CHEWY SWEETS WITHOUT GELATIN



Flavoured Jelly Sweets	Fruit Flavoured Hipster Bean Sweets
Belgium	France
Lutti	Food & Motion
Lutti Scoubidou Play	Not Guilty Sweet Revolution
sugar, glucose-fructose syrup, wheat flour, glucose syrup, dextrose, modified starches (modified potato starch, modified tapioca starch), vegetable oil (palm oil), acidifier (citric acid), stabilizers (acacia gum , carboxymethylcellulose), flavorings, food coloring (carrot concentrates, hibiscus colour, apple colour, safflower colour, sweet potato colour, spirulina colour, radish colour, cherry colour), antioxidants (ascorbic acid, tocopherol rich extract), coating agent (white beeswax)	cane sugar*, glucose syrup*, acidifier (lactic acid, citric acid), gelling agent (pectin), starch*, natural flavourings, colour concentrates (pumpkin concentrate*, carrot concentrate*, blackcurrant concentrate*, apple concentrate*), coating agent (carnauba wax*), sunflower oil* , emulsifier (arabic gum*) , wheat starch* * from organic farming



TEXTURING PROPERTIES

HARD BOILED CANDY

- Thickening agent **providing a nice texture** and an **anti-crystallisation** effect
- Stabilization and improvement of the hardness of the final product
- **Structure:** Short
Texture: Hard



RECIPE SHEET

Sugar (sucrose)	34 Kg
Glucose syrup 42DE	30 Kg
Acacia gum SENEGAL	14 Kg
Water	20 Kg
Citric acid (50% sol.)	2 Kg
Flavors, colors	qs

MANUFACTURING PARAMETERS



- Flavors, colors and acids incorporated after cooking
- Moulding operation
- Wrapping or packaging

FRUITS PASTILLES



Classic Strong Black Liquorice and Honey Lozenges	Mandarin Flavoured Pastilles
Spain	Germany
Kalfany Süße Werbung	Pastiglie Leone
Pulmoll	Pastiglie Leone
sugar, glucose syrup, liquorice extract (6.2%), brine, honey (0.9%), vegetable oil in variable proportions (coconut oil, palm oil), coconut fat, anti-caking agent (talc), menthol, anethole, thickener (gum arabic)	sugar, thickener (arabic gum, tragacanth gum), mandarin essential oil, acidifier (tartaric acid), natural colouring (curcumin, anthocyanins)



FRUITS PASTILLES



Japanese Citrus Flavour Throat Lozenges with GABA	Sugar-Free Pastilles with Sweet Mint Flavour
Japan	Norway
UHA Pipin	Brynild Gruppen
UHA Mikakuto e-ma Nodoame	Dent Crush
sugar, raffinose, GABA, starch syrup, starch, herbal extracts, dextrin, hirami lemon juice concentrate, jabara juice, yuzu citrus juice, lemon juice, sweetener (xylitol), vitamin C, acidifier, flavouring, polysaccharide thickener (gum arabic), sucrose ester, colouring (carotenoid), emulsifier	sweeteners (xylitol (39.6%), maltitol, sorbitol, steviol glycosides), stabilizer (gum arabic), water, flavouring, colours (E100, E141, E133), glazing agents (coconut oil, glycerol, E901)



> more and more pastilles formulated with polyols to replace sugar

TEXTURING PROPERTIES

SUGAR-FREE SOFT GUM

- Thickening agent **providing a soft texture** combined to polyol(s) syrup
- Sucrose replacement with acacia gum = **non cariogenic properties**
- **Structure:** Long
Texture: Soft



RECIPE SHEET

Acacia gum SENEGAL	36.5 Kg
Sorbitol (70% DM)	48.5 Kg
Water	15 Kg
Flavors, colors	qs

MANUFACTURING PARAMETERS



- Flavors, colors and acids incorporated after cooking
- Deposit operation on starch trays
- Last coating with specific oil or fine sugar

ADDITIONAL INFORMATION

Dry matter after cooking	69° Bx
Time / ventilated room	40-60 hours
End moisture content	54 – 60°C

FRUITS GUM DROPS



Raspberry Lemongrass Sugarfree Pastilles	Mixed Berry Chewy Refreshments
USA	Malaysia
Chicago Importing	Ricola
Läkerol	Ricola Fresh Pearls
sweeteners (maltitol syrup, sorbitol syrup, steviol glycosides), stabilizer (gum arabic) , acid (citric acid), artificial flavourings, juice from concentration (apple juice, elderberry juice, radish juice), vegetable oils (palm oil, coconut oil), glazing agent (carnauba wax)	thickener (gum arabic) , sweeteners (sorbitol syrup, acesulfame-K, sucralose), acid (citric acid), juice concentrates (0.8%) (raspberry juice concentrate, blackcurrant juice concentrate, bilberry juice concentrate), Ricola's herb mixture extract (0.5%), medium chain triglycerides, natural flavours (natural mixed berry flavour, natural menthol flavour, natural blackcurrant flavour), concentrate (carrot concentrate, hibiscus concentrate), wheat starch, permitted natural flavouring substances, acesulfame-K as permitted non-nutritive sweetening substance



LICORICE GUM DROPS



Sugar-Free Licorice Flavoured Gummies	Sugar Free Pastilles with Taste of Salty Licorice
Italy	Denmark
Dietorelle	Cloetta
Dietorelle Gommose	Läkerol YUP
sweeteners (maltitol syrup, maltitol, steviol glycosides (stevia extract)), thickener (gum arabic) , liquorice extract (3%), gelling agent (pectin), stabiliser (glycerol), natural flavouring, natural flavours (natural anise flavour, natural mint flavour), elderberry extract, vegetable oils (coconut oil, palm oil)	sweeteners (maltitol, sorbitol, xylitol, steviol glycosides), stabilizer (gum arabic) , ammonium chloride (salmiak), licorice extract, elderberry extract, natural aroma, fully hydrogenated rapeseed fat



➤ Acacia senegal 390A or I : used to texture dark candies

FUNCTIONAL PASTILLES



Cough Lozenges with Icelandic Moss	Pastilles with Vitamins, Blackcurrant, and Herbal Extracts
Czech Republic	Switzerland
DM Drogerie Markt, Czech Republic	Doetsch Grether
DM Mivolis	SwissHerbs Grether's Pastilles Clear Voice
Icelandic moss extract, gum arabic, sucrose, non-crystalline solution (sorbitol (70%)), menthol, peppermint oil, flavour, vegetable oils (medium chain triglycerides), pure water	thickener (gum acacia), sweeteners (sorbitol, sucralose, maltitol), water, glycerin (2%), acidifier (citric acid), blackcurrant concentrate (1.3%), flavour, sage extract (0.5%), edelweiss extract (0.03%), vitamin C (L-ascorbic acid), retinyl palmitate (vitamin A), vegetable oil (coconut oil), glazing agent (carnauba wax)



> Confectionery for health tends to increase

FRUITS PASTILLES BY TABLETING



Sugar-Free Pastilles with Sweet Mint Flavour	Mixed Strawberry, Blueberry and Raspberry Candy
France	USA
L'Atelier des Lacs	Hershey
L'Atelier des Lacs Pastille des Alpes	Ice Breakers Sours
artificial sweetener (sorbitol), dried blueberry (5%) (equivalent to fresh blueberry (40%)), acidifier (ascorbic acid), natural flavouring, coating agent (magnesium salts of fatty acids), acacia gum	sweeteners (sorbitol, aspartame), acidity regulator (malic acid), flavoring, coloring (anthocyanins), anti-humectants (magnesium stearate, silicon dioxide), acidulant (tartaric acid, citric acid), acacia gum , emulsifier (soy lecithin)



> Acacia seyal 381A or I : used under powdered form for tableting thanks to its cohesive properties

CUBERDONS



Handcrafted Belgian Cuberdons Mix	Raspberry & Lemon Cuberdons
Belgium	Belgium
Les Bonbons à l'Ancienne	My Sweet Yum
Sweet Cuberdons	My Sweet Yum
White Sugar, Waters, Glucose, gelling agent, Gum Arabic , Flavouring Substances, colourings (Carmine, Annatto, Lutein, Copper Complexes of Chlorophylls & Chlorophyllins, Patent Blue V)	cane sugar*, glucose syrup*, water, blackcurrant puree* (1.3%), gelatin, gum arabic* , natural flavourings *product from organic agriculture



CARAMELS & TOFFEEES



Caramel and Chocolate Candies	Eclairs Toffeee with Choco-Centre Party Pack
Poland	India
Wawe	Global Consumer Products
Wawel Tofflairs	Luvit. Chocorich
glucose syrup, sweetened condensed milk (23%) (milk, sugar), sugar, vegetable fat (palm fat, coconut fat), invert sugar syrup, chocolate (2.3%) (cocoa mass, sugar, fat reduced cocoa powder, cocoa butter, emulsifier (soy lecithin), flavour), skimmed milk powder, fat reduced cocoa powder, salt, natural flavour, emulsifier (arabic gum, soy lecithins)	liquid glucose, sugar, hydrogenated oils, milk solids, edible oils (refined rice bran oil, corn oil, RBD palmolein, refined palm kernel oil), cocoa solids (1.5%), emulsifiers (INS 471, INS 322), salt, stabilizer (INS 414) , added flavours (nature identical caramel flavour, nature identical vanilla flavour, nature identical chocolate flavour, artificial caramel flavouring substance, artificial vanilla flavouring substance, artificial chocolate flavouring substance)



5. ■

ACACIA GUM for GUMMING, COATING & POLISHING



Film Forming Agent

Protection
against moisture
and migration



ACACIA GUM : SENEGAL/SEYAL COMPARISON

FILM FORMING – COATING – TEXTURING -STICKING

- > Surfacing – suppress imperfections, creates a tight barrier against migrations
- > Improve mechanical resistance to shocks – improve resistance to heating (chocolate centers)
- > Makes chocolate or sugar adhesion on the centers easier

	Filmforming ability	Mechanical resistance	Heat resistance	Adhesive properties	Texturizing properties
SEYAL	++	+++	+++	++	+
SENEGAL	+++	+	++	+++	+++

COATING WITH SUCROSE

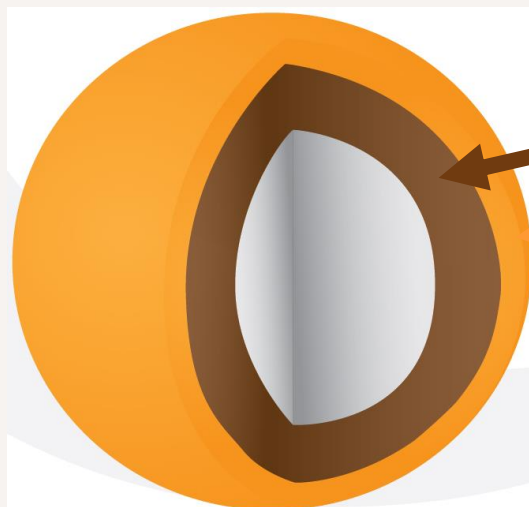
REGULAR COATING

Gumming operation of the centers:

- Smoothing of the surface
- Protection of the centers
- Prevention of the oil from migrating towards outside
- Better fixation of the coating blend

Stabilization and improvement
of the hardness of the final product

Dusting of acacia gum + sucrose:
facilitation of enlargement



RECIPE → GUMMING

Acacia gum SENEGAL	30%
Water	70%

RECIPE → SUCROSE COATING

Acacia gum SEYAL	20 – 25 %
Sucrose	75 – 80 %

MANUFACTURING PARAMETERS

Gumming performed with a pure acacia syrup

Coating realized with a combination of acacia gum (solution or powder) and sucrose to accelerate enlargement

ADDITIONAL INFORMATION

Number of sucrose loads	80-120
Total coating time	6 – 8 hours
Air drying temperature	100 – 140 °F

COATED ALMONDS



Fall Assortment Almonds	Sugared Almond
USA	Ivory Coast
Williams-Sonoma	Pastor
Medicis	Macao
sugar , almonds (43%), rice starch, potato starch, arabic gum , glucose syrup, artificial flavors, natural flavors, colors (FD&C blue no. 1, FD&C blue no. 2, yellow no. 5, yellow no. 6, red no. 40, ammonia caramel), glazing agent (carnauba wax, vegetable oil (coconut oil))	almonds, sugar , starch, arabic gum , glucose, vanillin, colourings (E131, E133)



DRAGEES



Assorted Mint and Peppermint Flavor Dragees	Sour Strawberry Flavour Chewy Dragees
Colombia	Australia
Ferrero	Perfetti Van Melle
Tic Tac	Mentos
sugar, maltodextrin, rice starch, flavor (natural flavors (natural mint flavor, natural peppermint flavor), natural identical flavor (nature identical mint flavor, nature identical peppermint flavor)), stabilizer (arabic gum) , fructose, anti caking agent (magnesium stearate), acidifier (citric acid), glazing agent (carnauba wax), color (brilliant blue FCF color, tartrazine color)	sugar, glucose syrup, acid (citric acid, malic acid), hydrogenated vegetable oil, starch, thickeners (gum arabic, gellan gum) , flavouring, glazing agent (carnauba wax), emulsifier (sucrose esters of fatty acids), colour (beet red)



COATING

WITH CHOCOLATE AND SUCROSE

REGULAR COATING



MANUFACTURING STEPS

Gumming operation of the centers:

- Smoothing of the surface
- Protection of the centers
- Prevention of exudation of centers towards outside
- Improvement of mechanical resistance of angular centers
- Better heat resistance of chocolate or heat sensitive centers



Gumming performed with a pure acacia syrup

Coating with chocolate

White coating with sucrose for nice and consistent coloring operation

Coating with colourings and sucrose

CHOCOLATE COATED NUTS

Peanut Chocolate Candies
USA
Mars Wrigley Confectionery
M&M's
milk chocolate (sugar, chocolate, skim milk, cocoa butter, lactose, milkfat, soy lecithin, salt, artificial flavours, natural flavours), sugar, peanuts, cornstarch, less than 1% (palm oil, corn syrup, dextrin, colouring (red 40, yellow 5, blue 1, red 40 lake, yellow 5 lake, blue 1 lake, yellow 6, yellow 6 lake, blue 2 lake, blue 2), carnauba wax, gum acacia)



CHOCOLATE COATING

Gumming operation of the centers:

- Surface smoothing
- Migration prevention
- Better fixation of the chocolate coating

Chocolate coating with acacia gum:

Elasticity for a better stability of the final product

Polishing for shiness:

2 steps : acacia gum until nice shiny aspect and then shellac or waxes to set brightness

COATING WITH CHOCOLATE



RECIPE → GUMMING

Acacia gum SEYAL	30%
Water	70%

RECIPE → CHOCOLATE COATING

Acacia gum SEYAL	5-10 %
Chocolate	
Surfacing agents: cocoa powder, acacia gum, shellac	

MANUFACTURING PARAMETERS

Gumming performed with a pure acacia syrup



Coating realized with a blend acacia gum/chocolate at 45°C

ADDITIONAL INFORMATION

Number of chocolate loads	20-25
Total coating time	640 - 75 min
Air drying temperature	13 - 16°C



OTHERS CHOCOLATE SPECIALITIES



Strawberry Cheese Milk Flavoured Chocolate Filled with Soft Candy	Superior Milk Chocolates Filled with Milk and Hazelnuts
China	Belgium
Mars	Ferrero
Dove Xiao Qing Xin x Nayuki	Kinder Schoko-Bons
white chocolate (white granulated sugar, full cream milk powder, cocoa butter, edible vegetable oil, emulsifier (soya lecithin, polyglycerol polyricinoleate), food flavouring (carmine)), soft candy (maltose syrup, white granulated sugar, thickener (gelatin, pectin), humectant (d-sorbitol solution), acidity regulator (citric acid, DL-malic acid), coating agent (carnauba wax), colouring agent (erythrosine), food flavouring), strawberry powder, cheese powder (processed cheese), food additives (thickener (gum arabic) , coating agent (shellac))	superior milk chocolate (50%) (sugar, milk powder, cocoa butter, cocoa mass, emulsifier (soy lecithins), flavouring), sugar, skimmed milk powder, palm fat, hazelnuts (5.8%), concentrated butter, dark chocolate (sugar, cocoa paste, cocoa butter, emulsifiers (soy lecithins), flavours), coating agents (arabic gum, shellac) , glucose syrup, emulsifiers (soy lecithins), flavourings



CHOCOLATE COATED NUTS



Macadamias	White Chocolate Coated Hazelnut Dragees
Germany	Turkey
Lidl	BIM Birlesik Magazalar
Deluxe	Harras
milk chocolate (67%) (sugar, whole milk powder, cocoa mass*, cocoa butter*, sweet whey powder, emulsifier (soya (lecithin)), natural vanilla flavour), macadamia nuts (31%), glazing (1.9%) (glucose syrup, glazing agent (arabic gum)) *Rainforest Alliance certified	white chocolate (75%) (sugar, cocoa butter, whole fat milk powder, skimmed milk powder, emulsifier (soy lecithin), vanilla flavouring), hazelnut (25%), thickener (gum arabic)



OTHERS CHOCOLATE COATED DROPS



Cookies 'n' Creme White Chocolate with Cookie Bits	Milk Chocolate Rounds
Taiwan	USA
Hershey	Snyder's-Lance
Hershey's Drops	Snyder's of Hanover
white chocolate (sugar, cocoa butter, skimmed milk powder, corn syrup solids, lactose, vegetable oil (palm oil, sunflower oil), milk fat, soy lecithin, polyglycerol esters of interesterified ricinoleic acid, vanillin), biscuits (wheat flour, sugar, rapeseed oil, cocoa powder, soy lecithin, sodium bicarbonate, whole milk powder, cocoa mass, vanillin), gum arabic , glucose syrup, hydrogenated coconut oil, shellac, citric acid	milk chocolate (sugar, cocoa butter, chocolate liquor, whole milk powder, soy lecithin (an emulsifier), salt, vanilla), pretzel balls (enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), vegetable oil (one or more of the following (canola oil, peanut oil, cashew oil, almond oil, pistachio oil, hazelnut oil, coconut oil, macadamia oil, walnut oil and/or pecan oil))), malt (tapioca syrup, malt extract), sea salt, yeast, soda), gum acacia , shellac, corn syrup



OTHERS CHOCOLATE COATED DROPS



Yogurt Covered Nuts	Strawberries in Milk Chocolate
Norway	Switzerland
Brynild Gruppen	Lidl
Den Lille Nøttefabrikken	Mister Choc
yoghurt coating (78%) (vegetable fats (coconut oil fat, cocoa butter), sugar, yogurt powder (15%), skimmed milk powder, whey powder, emulsifier (E322 (sunflower lecithin)), glazing agents (E414, E904, glucose syrup, tapioca starch, E422) , roasted nuts (almonds, hazelnuts, cashews, rapeseed oil)	milk chocolate (sugar, cocoa butter, whole milk powder, fat reduced cocoa powder, emulsifier (sunflower lecithins, polyglycerol polyricinoleate), vanilla extract), freeze-dried strawberries, coating agent (shellac, glycerol), glucose syrup, stabiliser (gum arabic) , sugar, modified starch, coconut oil



COATING WITH POLYOLS

SUGARFREE COATING

Gumming operation of the centers:

- Protection of the centers:
corners, tips or fragile parts
- Better fixation of the coating blend

Sugar free coating with polyols:

acacia gum replaces sucrose
and provides a syrup texture,
favors stability and hardness

Non cariogenic, low calorific
value



RECIPE → GUMMING

Acacia gum SEYAL	30%
Water	70%

RECIPE → COATING WITH POLYOLS

Acacia gum SEYAL
Polyol (sorbitol, xylitol...)
Water, flavors, colors

MANUFACTURING PARAMETERS



Gumming performed with a pure
acacia syrup
Coating realized with a blend
of acacia gum with polyols, flavors

ADDITIONAL INFORMATION

- Coating layer by layer to obtain a very thin crystallization
- Last polishing operation made with a solution of acacia gum



Texturing properties

SUGAR FREE CHEWING GUM



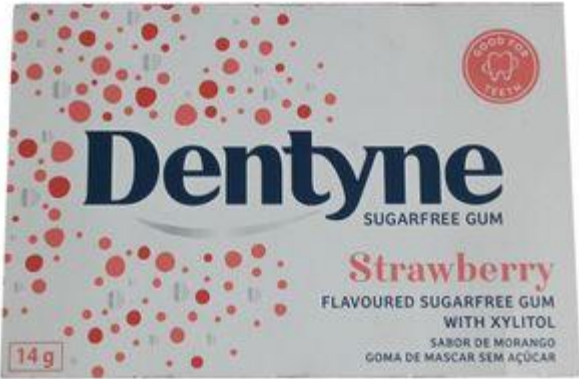
Green Apple Chewing Gum	Watermelon Flavoured Sugar Free Gum
Japan	China
Lotte	Gary & Bros Confectionary
Lotte Xylitol White	Kiskis
maltitol, isomalt, vegetable oil, sweetener (xylitol, aspartame and L-phenylalanine compound), gum base, thickener (gum arabic), flavouring, sodium hexametaphosphate, softening agent, glazes, hesperidin	xylitol (>=60%), gum base, maltitol, food flavouring, gum arabic, phospholipids, shellac, Carnauba wax, sucrose fatty acid ester, acesulfame-K, sucralose



SUGAR FREE CHEWING GUM



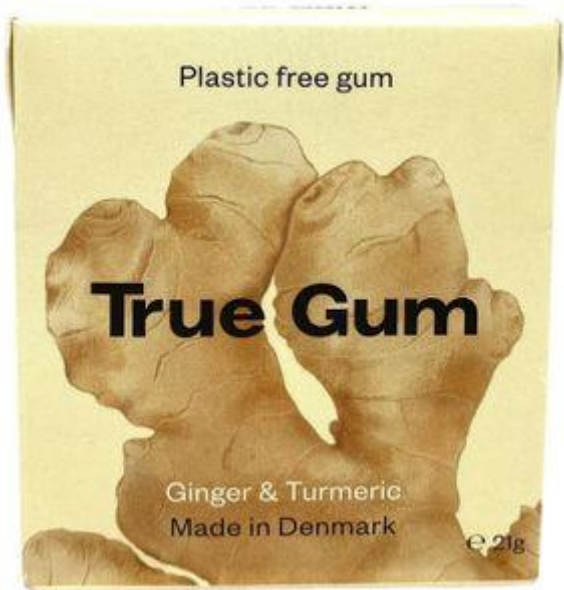
Sugarfree Bubblemint Chewing Gum	Mint Flavoured Chewing Gum
UK	Tanzania
Mars Wrigley Confectionery	Mondelez
Wrigley's Extra Refreshers	Dentyne
sweeteners (xylitol, sorbitol, mannitol, aspartame, acesulfame K), gum base, flavourings, thickener (gum arabic), emulsifier (soybean lecithin), glazing agent, carnauba wax, antioxidant (BHA), colour (E133)	sorbitol, maltitol, gum base, xylitol, flavours, thickener (E414), acids (E330, E296), maltitol, emulsifiers (E470a, E435), non-nutritive sweeteners (aspartame*, acesulfame K), colors (E171), glazing agent (E903), antioxidants (BHT-E321) *contains phenylalanine



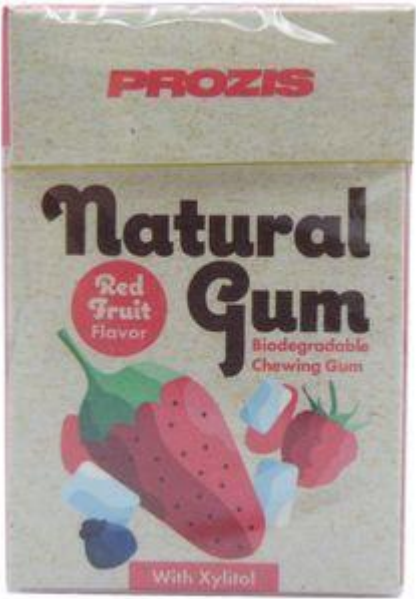
CHEWING GUM WITH TRENDY FLAVORS



CBD Gum	Plastic Free Gum with Ginger & Turmeric
Netherlands	Norway
Blockhead HQ	True
Blockhead	True Gum
sweeteners (sorbitol, isomalt, maltitol, xylitol (3%), steviol glycosides (0.13%)), gum, peppermint flavour, thickener (arabic gum) , hemp oil (0.05%) (CBD (3mg)), humectant (glycerol), glazing agent (carnauba wax), antioxidant (E306)	sweeteners (xylitol, steviol glycosides), chicle gum base, moisturising agent (glycerin), ginger powder (3%), natural flavours, turmeric powder (1%), acacia gum , carrot concentrate



BIODEGRADABLE GUM WITH A NATURAL GUM BASE



Red Fruit Flavour Natural Gum	Mint Flavoured Chewing Gum
Germany	Austria
Prozis	Bergfalke
Prozis	Alpengummi
sweetener (xylitol), natural gum base, natural flavouring, humectant (glycerol), thickener (gum arabic) , anti-caking agent (magnesium salts of fatty acids), glazing agent (carnauba wax)	chewable base*, sweetener (xylitol (35%)) , stabilizer (gum arabic) , humectant (glycerin**), emulsifier (lecithin (from sunflower)), natural flavour, antioxidant (alpha-tocopherol) *from tree resin and beeswax **plant-based



BIODEGRADABLE GUM WITH A NATURAL GUM BASE



Mint Plant-Based Chewing Gum	Cinnamon Flavoured Plant Based Plastic Free Chewing Gum
Germany	Sweden
MSBH	Chewsy
Oh My Gum!	Chewsy
sweetener (xylitol), natural chicle gum base, natural mint flavour (3.8%), humectant (glycerol), anticaking agent (magnesium stearate), thickener (gum arabic), glazing agent (carnauba wax)	xylitol, natural gum base, gum arabic, natural flavour, sunflower lecithin, carnauba wax



FUNCTIONAL CHEWING GUM



Red Energy Caffeine Gum	Yogurt & Berry Chewing Gum with Vitamin D
Germany	Japan
Lemon Pharma International BVBA	Mondelez
Enerjetix	Recaldent
sweetener (sorbitol, isomalt, maltitol syrup, sucralose), gum mass (emulsifier (soy lecithin)), flavours, anhydrous caffeine (1.7%), thickener (gum arabic) , humectant (glycerin), coating agent (carnauba wax), colour (vegetable concentrate (radish concentrate, lemon concentrate, blackcurrant concentrate)), antioxidant (tocopherol-rich extracts (vitamin E))	maltitol (China, Thailand), hydrogenated starch syrup, CPP-ACP (casein phosphopeptide amorphous calcium phosphate), sweeteners (sorbitol, xylitol, aspartame and L-phenylalanine compound, acesulfame potassium, sucralose), gum base, gum arabic , mannitol, acidifier, flavouring, lecithin, vegetable wax, vitamin D



6. R&D at A&R in CONFECTIONERY

GELATIN SUBSTITUTION

GUMMIES

- For a 100% vegetable formula to reproduce elasticity and softness generated by gelatin based gummies: acacia gum combined with may hydrocolloids
- Bottlenecks : process, sensory aspects of gummies and evolution during storage
- New recipe meets expectations / melting, elasticity, firmness
- Needs to be validated by confectionery industries



RECIPE

Water	38,45 %
Glucose syrup 60 DE	26,91 %
Glucose syrup 40 DE	11,53 %
Sucrose	19,22 %
Acacia SENEGAL gum	1,20 %
Iota Carrageenan RD20/35	1,20 %
Agar agar RD20/01	0,69 %
Citric acid	0,38 %
Tri-sodium citrate	0,38 %
Colorings/Flavours	q.s./0.04 %

MANUFACTURING PARAMETERS



- Cooking of hydrocolloids at 105°C
- Flavors, colors and acids incorporated after cooking
- Deposit operation on starch trays
- Last coating with specific oil or not

GELATIN SUBSTITUTION

MARSHMALLOWS

- For a 100% vegetable formula to reproduce aerated and nice texture : gelatin free and modified starch free
- Bottlenecks : process, sensory aspects and evolution during storage
- New recipe meets expectations / not light structure
- Needs to be validated by confectionery industries



RECIPE

Acacia SENEGAL gum	21.0 %
Water	18.9 %
Sucrose	18.9 %
Glucose syrup 40 DE	18.9 %
Kappa Carrageenan	2.0 %
Colorings, Flavours	q.s.
Sucrose	9.6 %
Egg white	10.7 %

MANUFACTURING PARAMETERS



- Step 1 : mixing at 120°C
- Step 2 : wixing at 70°C
- Mixing of the 2 blends until cooling
- Deposit operation on starch trays
- Drying for 24h at room temperature

TiO₂ SUBSTITUTION

EXISTING

Sucrose esters – E473

Rice starch

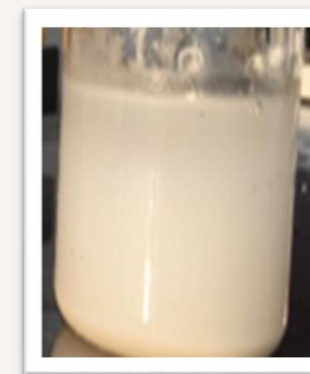
Aminated pectins – E440ii

Calcium carbonate – E170

Not mandatory if sucrose coating is well mastered

Association of acacia gum with proteins → white particles according to ratio and pH

Ongoing project : needs to be scaled-up



Trial	TiO ₂	AG:Rice protein	AG:Potato protein	Rice starch
Dosage	2%	5%	2%	8%
Results				

7. ACACIA GUM AND HEALTH

ACACIA GUM AND HEALTH

TEETH AND GUT FRIENDLY



ACACIA GUM IS A SOLUBLE FIBER

ALLAND & ROBERT GUARANTEES

A minimum fiber content of 90%

(Measures according to the international method AOAC 985-29) for all **Acacia Fiber range.**

Fiber enrichment with acacia gum can allow nutritional allegations according to the dosage (« source of » / « enriched in fibers ») and the regulation of every country.

AS A FIBER, ACACIA GUM OFFERS SEVERAL ADVANTAGES

Resistance to acidity and heat	Neutral taste with very low viscosity	Positive effect on rheology
Low calorific value	Non cariogenic effect	No side effect, no discomfort
Scientifically recognized prebiotic effects	Blood glucose management	Non cancerogenic effect

NEW !!! ACACIA FIBER STATUS RECOGNIZED BY US FDA SINCE 17th Dec 2021



ACACIA GUM IS IN LINE WITH TODAY'S TRENDS



**More fiber,
less sugar**



**Clean & clear
label**



**Vegetarian/
vegan diets**

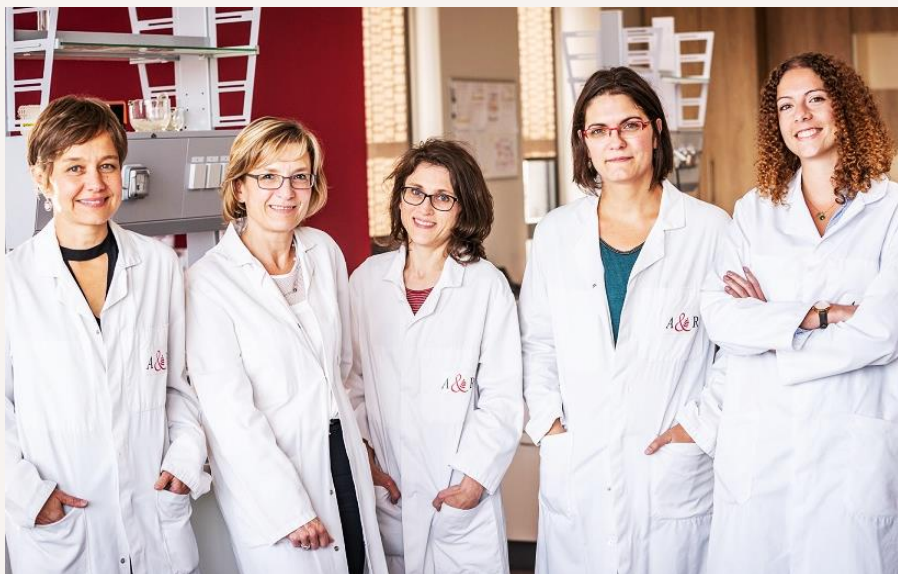


**Healthy
& organic food**



Ethic food





THANK YOU FOR YOUR ATTENTION!

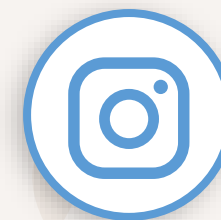
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