ALLAND & ROBERT

Since 1884

NEW COMERS WEBINAR

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R&D Director

June 2026

AGENDA

1. A&R COMPANY
2. ACACIA GUM SOURCING
3. WHAT IS ACACIA GUM?
4. APPLICATIONS
5. R&D and STRATEGY
6. WHAT IS KARAYA GUM?
7. COMPETITION
8. MARKETING & COLLABORATION

1. THE COMPANY

KEY FIGURES

1884
Foundation
of the company

6TH
Generation
family company

75
Millions €
revenue 2025

KEY FIGURES

142 Years of **experience** in natural gums

70 Countries **Alland & Robert** sells to

100% Dedicated from the very start to **natural gums**

KEY FIGURES

3
Factories

5
Spray drying towers

130
Employees in **2025**

32,000 t + 2,500 t
Capacity of acacia gum **2025**

1,000 t
Capacity of **karaya gum**

95%
Export

OUR MAIN NATURAL GUMS

Acacia Gum

Coming from **Acacia trees**

For food, pharmaceutical, cosmetic, technical applications

Karaya Gum

Coming from **Sterculia trees**

For pharmaceutical, food applications

FOOD SAFETY

BRC 9
H.A.C.C.P

To certify **quality** and **safety**, and **protect** the end consumer

PHARMACEUTICAL SAFETY

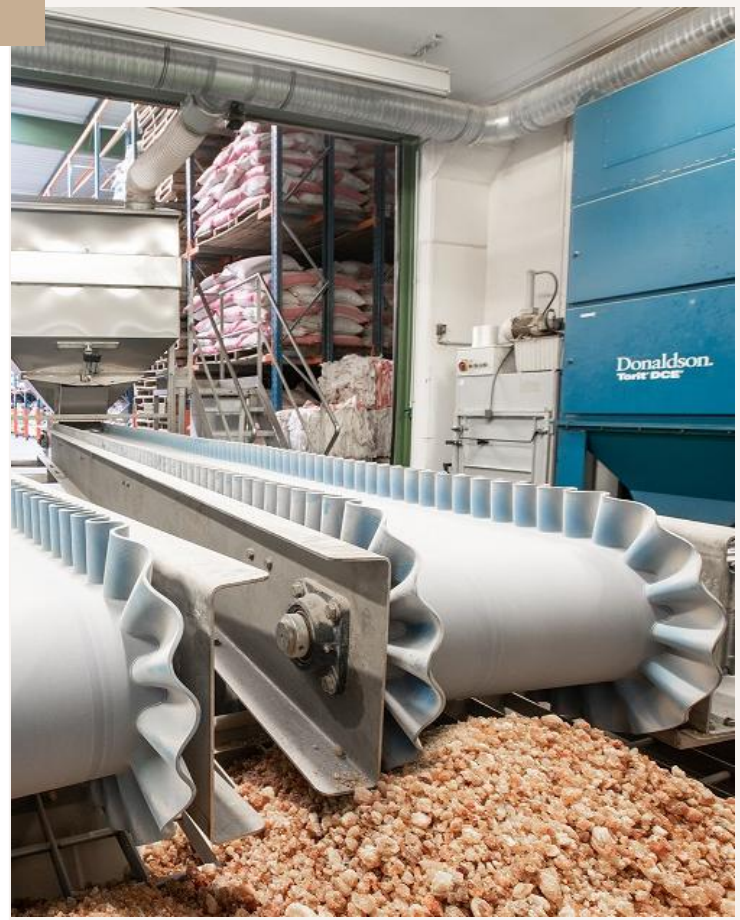
ANSM

Ensure that **Alland & Robert can supply both excipients and active ingredients** to pharmaceutical companies

QUALITY SYSTEM CERTIFICATIONS

ISO 9001

Ensure that **Alland & Robert meet the needs of customers and other stakeholders** while meeting statutory and regulatory requirements



SOCIAL AND SOCIETAL COMMITMENT

Sedex

SMETA REFERENTIAL

4 PILLARS:
Labor standards
Health & safety
Environment
Business ethics

CDP DISCLOSURE INSIGHT ACTION
ecovadis
GOLD | Top 5% ecovadis Sustainability Rating JUL 2024

CHSWC

fair for life
We've signed the WE USE WILD PLEDGE
THE GLOBAL COMPACT
United Nations Global Compact

OTHER CERTIFICATIONS

USDA ORGANIC
NON GMO Project VERIFIED nongmoproject.org
HFA APPROVED HALAL FOOD AUTHORITY
KLBD Kashrut Division - London Beth Din
ECOCERT COSMOS CERTIFIED
APPROVED FOOD PRODUCT FODMAP FRIENDLY

ORGANIC

KOSHER & HALAL

NON-GMO PROJECT

4 LOCATIONS

PARIS

Administrative
Sales
Management

SAINT AUBIN

PORT-MORT

AHMEDABAD

NEW PRODUCTION AREA

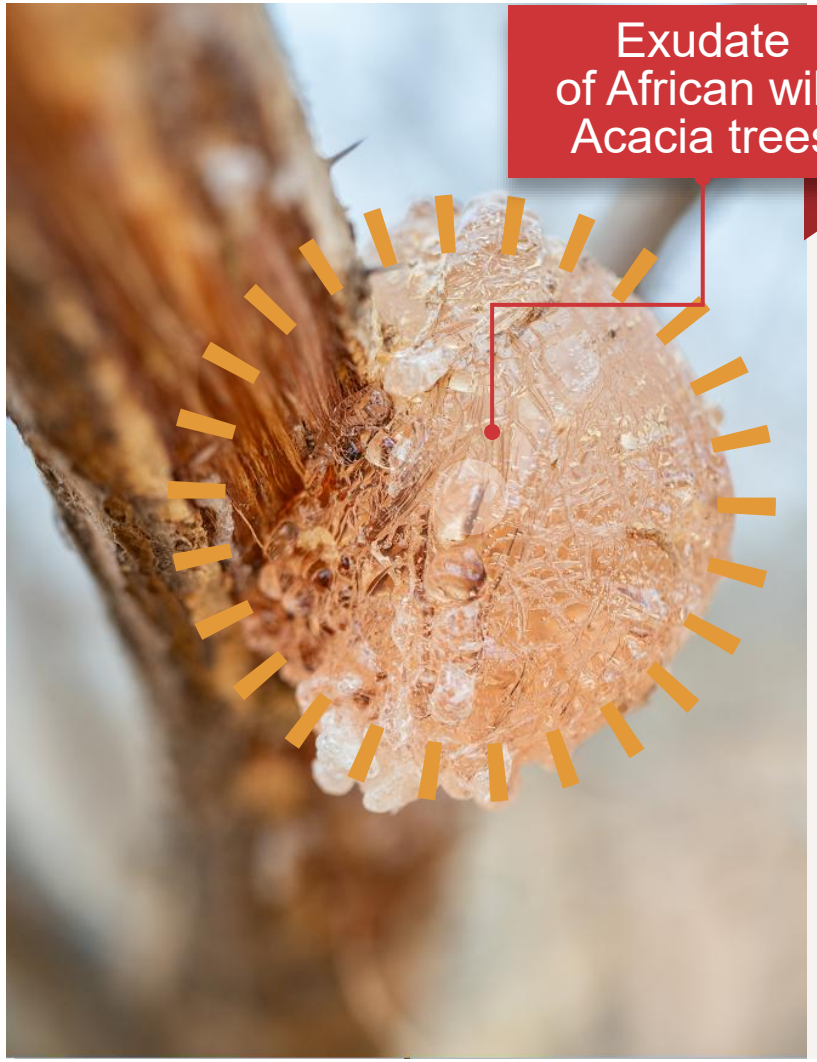
Production capacity : +50% /year

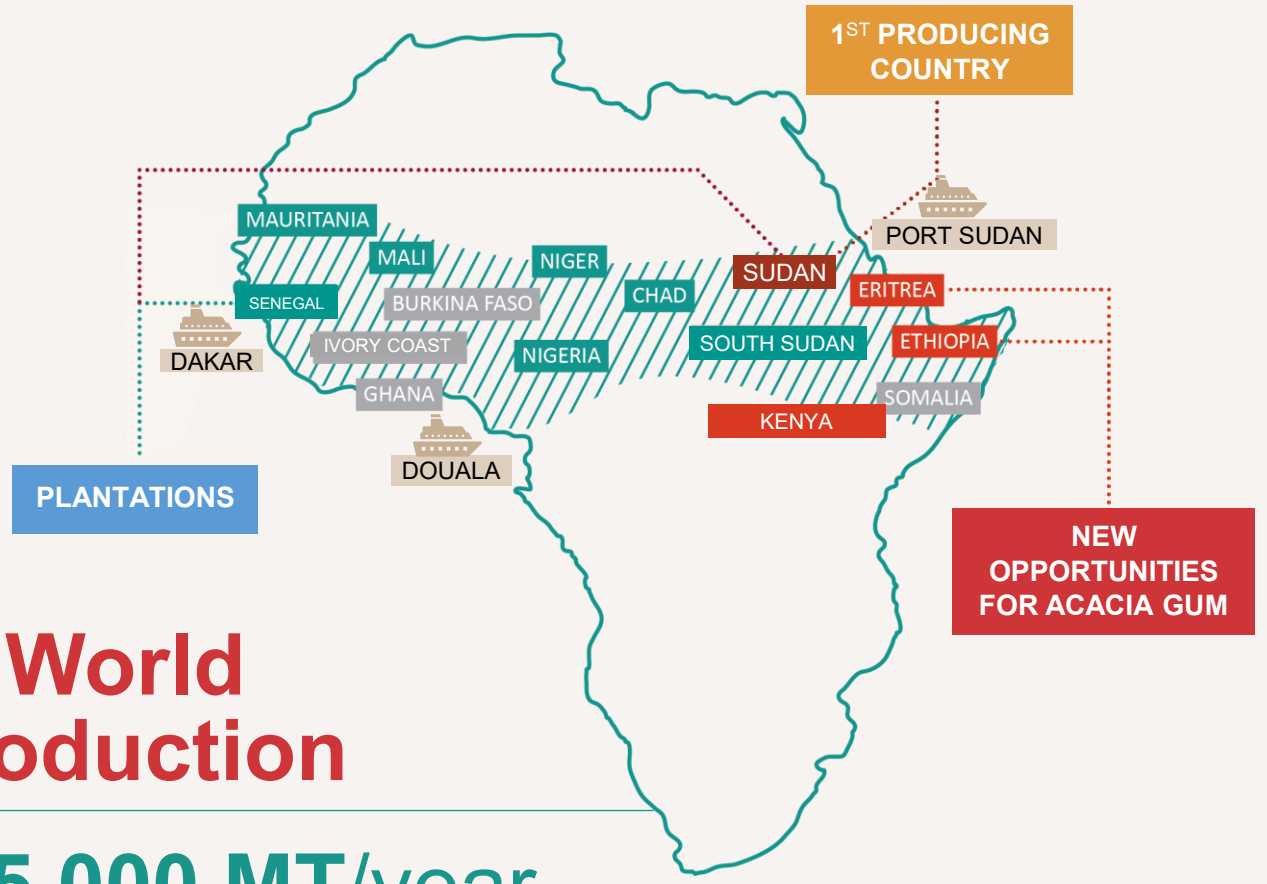
32,000 t + 2,500 t

Capacity acacia gum **2025**

2. SOURCING & CURRENT SITUATION

MAIN PRODUCING COUNTRIES

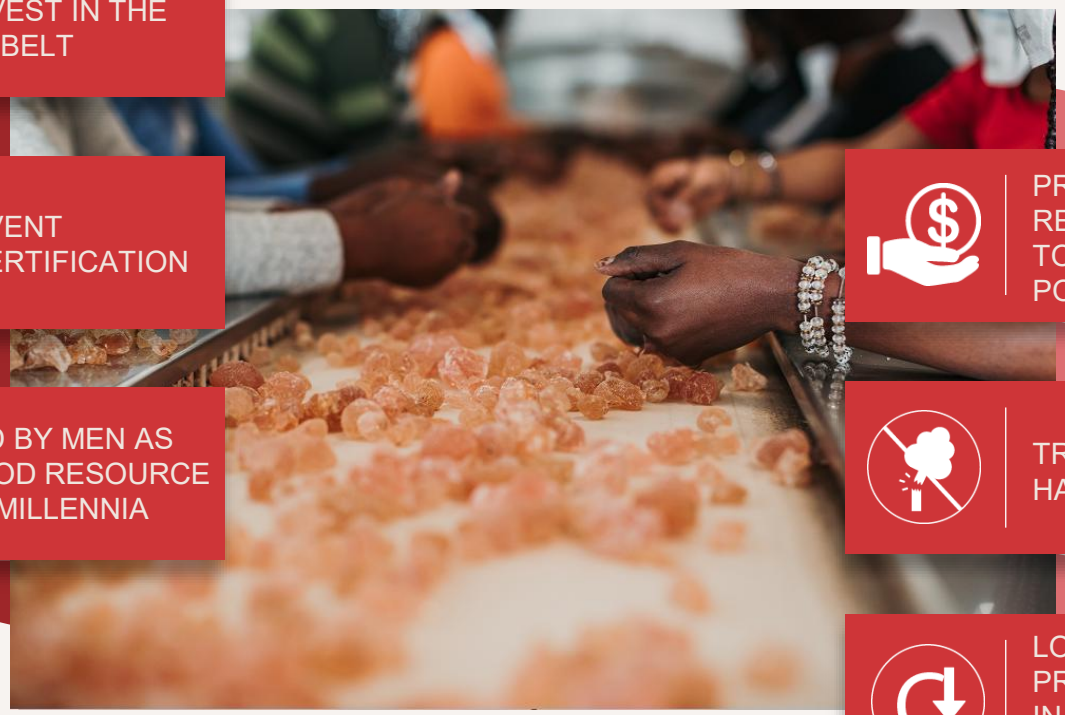




World production

75 000 MT/year

SOURCED SUSTAINABLY DIRECTLY FROM NATURE !



- HAND MADE HARVEST IN THE GUM BELT
- PREVENT DESERTIFICATION
- USED BY MEN AS A FOOD RESOURCE FOR MILLENNIA
- PROVIDE REVENUES TO LOCAL POPULATIONS
- TREE FRIENDLY HARVEST
- LOW CARBON PROCESS IN THE WHOLE PRODUCTION CHAIN

[redacted]

[redacted]

ALLAND & ROBERT

WORKS WITH RAW MATERIAL SUPPLIERS

1

Working with suppliers to **improve harversting** and selection of crude gum and **ensure safety of supplies**

2

Helping the development of the local acacia gum industry in Africa
Kibbling and sorting installations in Senegal, Chad and Mali

3

- Working with all stakeholders to **share information**

- **Technical assistance** to our providers

- Installation of warehouses in **Senegal, Chad and Mali**

4

- **Fair trade relations**

- **Transparent and honest** relationships

- Offering **Fair Price**

5

Yearly audits to our suppliers, including **safety, ethical, environmental** and **societal** standards

3. WHAT IS ACACIA GUM?

1. HIGH SAFETY INGREDIENT

E414

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

SENEGAL GUM

PROTEIN CONTENT

2%

LAEVOROTATORY OPTICAL ROTATION

-20 to -35°

DIFFERENCES IN FUNCTIONAL PROPERTIES

SEYAL GUM

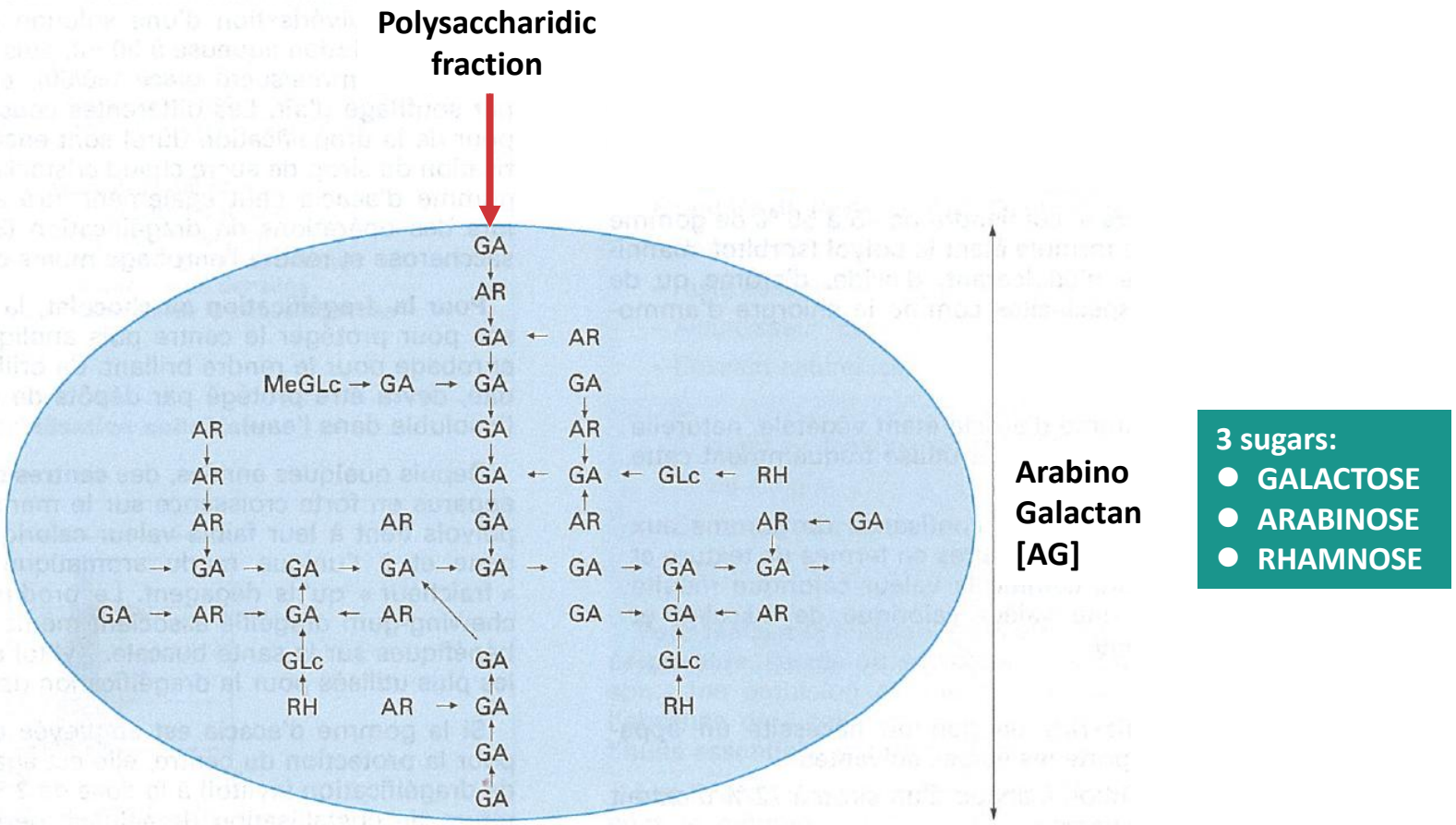
PROTEIN CONTENT

1%

DEXTROROTATORY OPTICAL ROTATION

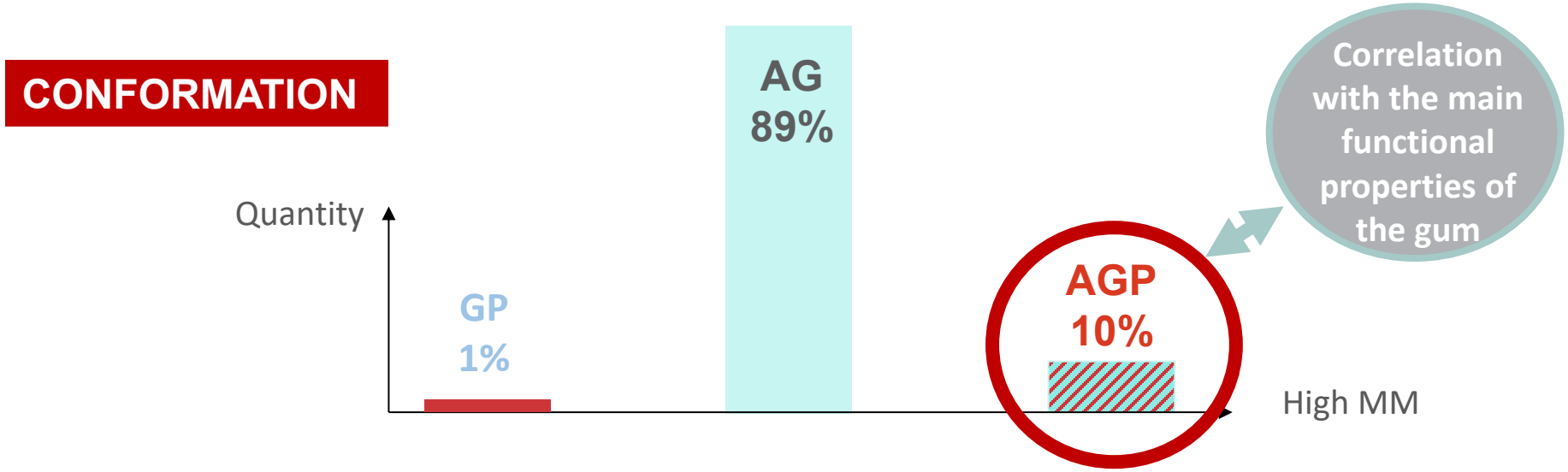
+35 to +60°

THE CHEMICAL STRUCTURE OF ACACIA GUM



3 sugars:
- **GALACTOSE**
- **ARABINOSE**
- **RHAMNOSE**

THE CHEMICAL STRUCTURE OF ACACIA GUM



Evaluation by SEC-MALLS → crude gums and final products

FUNCTIONAL PROPERTIES

OF ACACIA **SENEGAL** AND **SEYAL**

ACACIA GUM IS USED IN MANY INDUSTRIES

CONFECTIONERY

BEVERAGES

FLAVORS

DIETARY

WINE

BAKERY

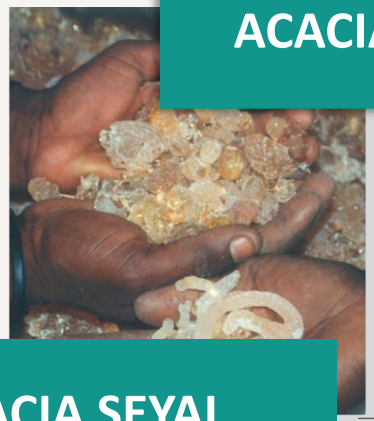
PET FOOD

DAIRY

COSMETIC

PHARMACEUTICAL

ACACIA GUM PROCESS



ACACIA SENEGAL

ACACIA SEYAL

QUALITY TESTS

GUM SELECTION
1 SORTING

KIBBLING

SOLUBILIZATION
& FILTRATION

SPRAYDRYING

PACKAGING

Before spray drying…

ACACIA SENEGAL

SOLUBILIZATION & FILTRATION

	REGULAR	ENHANCED	DARK
references:	396 A	500 A	390 A
	396 I	500 I	390 I
	BA396	BA500	BA390

A = regular spray dried
I = instant soluble
BA = Beyond Acacia

Before spray drying…

ACACIA SEYAL

SOLUBILIZATION & FILTRATION

	REGULAR	BLEACHED	DARK
references:	386 A	381 A	333 A
	386 I	381 I	333 I
	BA386	BA381	BA333
	Residual sulphites: LESS THAN 10 PPM No declaration	Processed WITHOUT SULPHITES	Processed WITHOUT ADDITIVE

A = regular spray dried
I = instant soluble
BA = Beyond Acacia

Before spray drying… organic grades

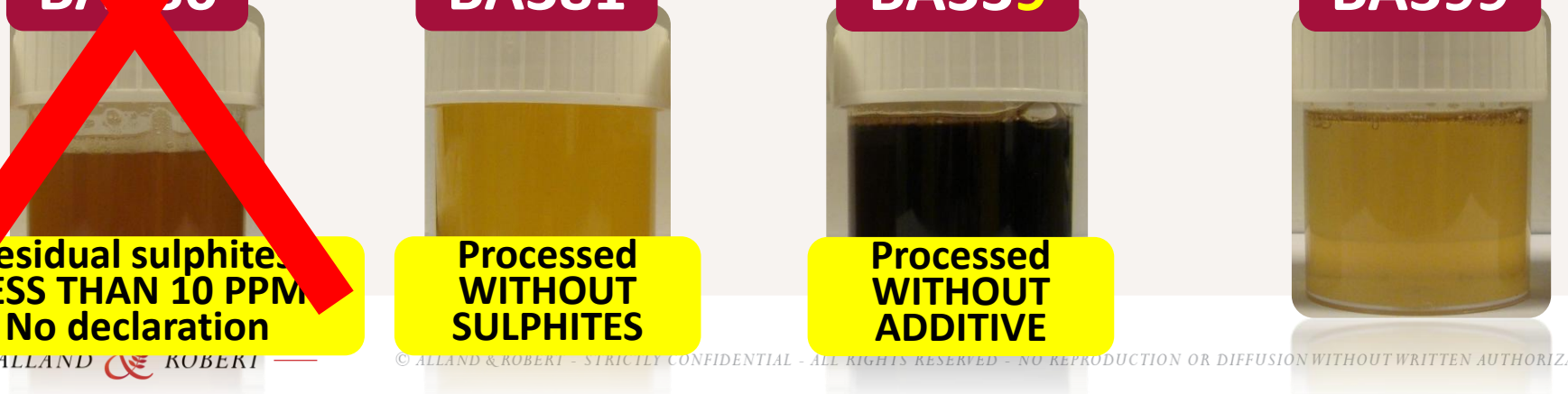
ACACIA SEYAL

SOLUBILIZATION & FILTRATION

ACACIA SENEGAL

SOLUBILIZATION & FILTRATION

REGULAR	ORGANIC NOP	ORGANIC	ORGANIC
386 A	381 A	339 A	399 A
386 I	381 I	339 I	399 I
BA386	BA381	BA339	BA399



Residual sulphites LESS THAN 10 PPM No declaration

Processed WITHOUT SULPHITES

Processed WITHOUT ADDITIVE

ACACIA FIBRE RANGE

ACACIA SENEGAL

SOLUBILIZATION & FILTRATION

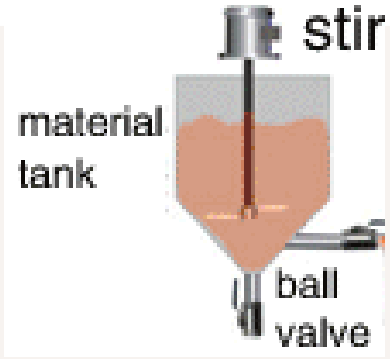
REGULAR	ORGANIC
AF396	AF399
BAF396	BAF399

ACACIA SEYAL

SOLUBILIZATION & FILTRATION

SULFITED	BLEACHED	REGULAR	ORGANIC
AF386	AF381	AF333	AF339
BAF386	BAF381	BAF333	BAF339

Spray drying operation : no modification, just a perfect step keeping the integrity of the gum



CRUDE GUM + water

Possibly processing aids

SOLUBILISATION PURIFICATION STEPS

LOW CARBON FOOTPRINT
BEYOND Acacia®
HIGH DENSITY GRANULES

SINGLE DRYING TECHNOLOGY

MULTIPLE EFFECT DRYING TECHNOLOGY

GRANULATION

FINE REGULAR SPRAY DRIED QUALITIES

FLUIDISED BED DRYING

GRANULATED GUM

INSTANT SOLUBLE QUALITIES

STANDARD GRANULOMETRY

MEDIUM GRANULOMETRY

COARSE GRANULOMETRY

A = regular spray dried

I = instant soluble

Beyond Acacia®

The only range of acacia gum with **low carbon footprint** and **high dispersion ability.**

LOW CARBON

Environmental exemplarity with the lowest carbon footprint and a sustainable value chain.

HIGH DENSITY

Technological excellence with the highest density and dispersion ability.

By using Beyond Acacia®, you can positively affect the planet and the environment while using a highly technological and expert product.

An innovative process

for optimized acacia gum

LOW CARBON FOOTPRINT
BEYOND Acacia®
HIGH DENSITY GRANULES

HIGH DENSITY GRANULES

IMPROVED SOLUBILIZATION even in cold manufacturing processes

EXCELLENT HYDRATION Properties

HIGH DISPERSION Ability

FOAMING REDUCTION during process

LESS DUSTS during pouring, excellent flowability & less lumps

Applications to avoid

for Beyond acacia gum

- **POWDERED BLENDS**
  Major parts of other powders are actually finer

- **MATRIXES WITH POOR WATER AVAILABILITY**
  Regular spray dried acacia gum recommended

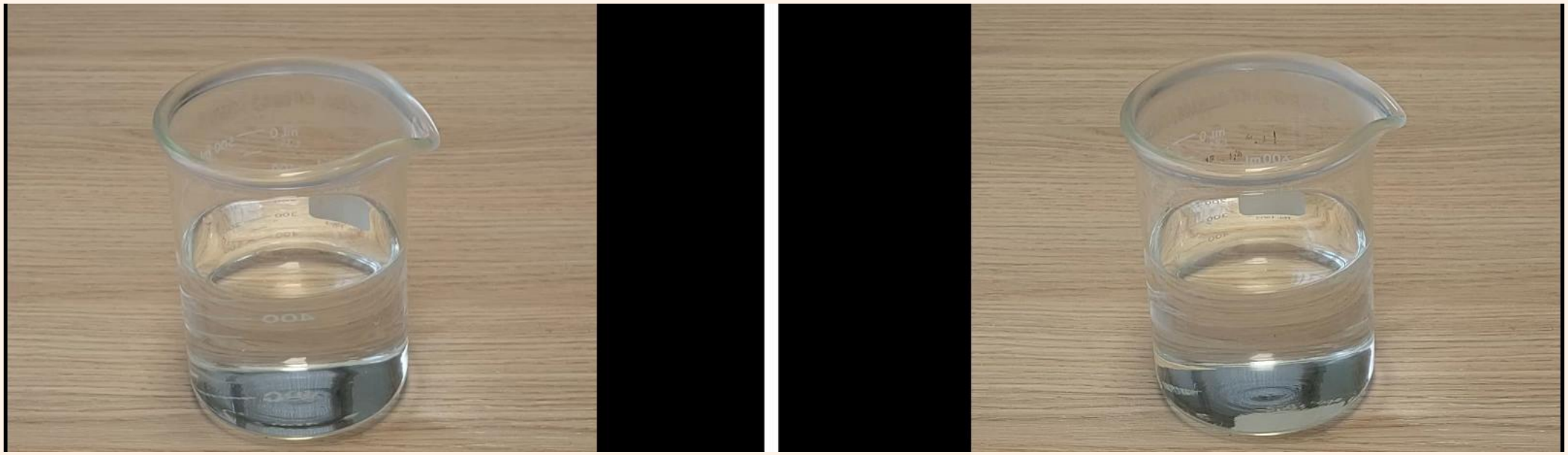
- **LIQUID PRODUCTS CONTAINING VERY LOW AMOUNT OF ACACIA GUM**
  Low stirring (ex : wine)

➔ **Conclusion : we recommend collecting as much information as possible about the finished product and even about the production processes when feasible.**

Advantages in use

Wettability of gum acacia in static conditions

Granulated **Standard Instant**

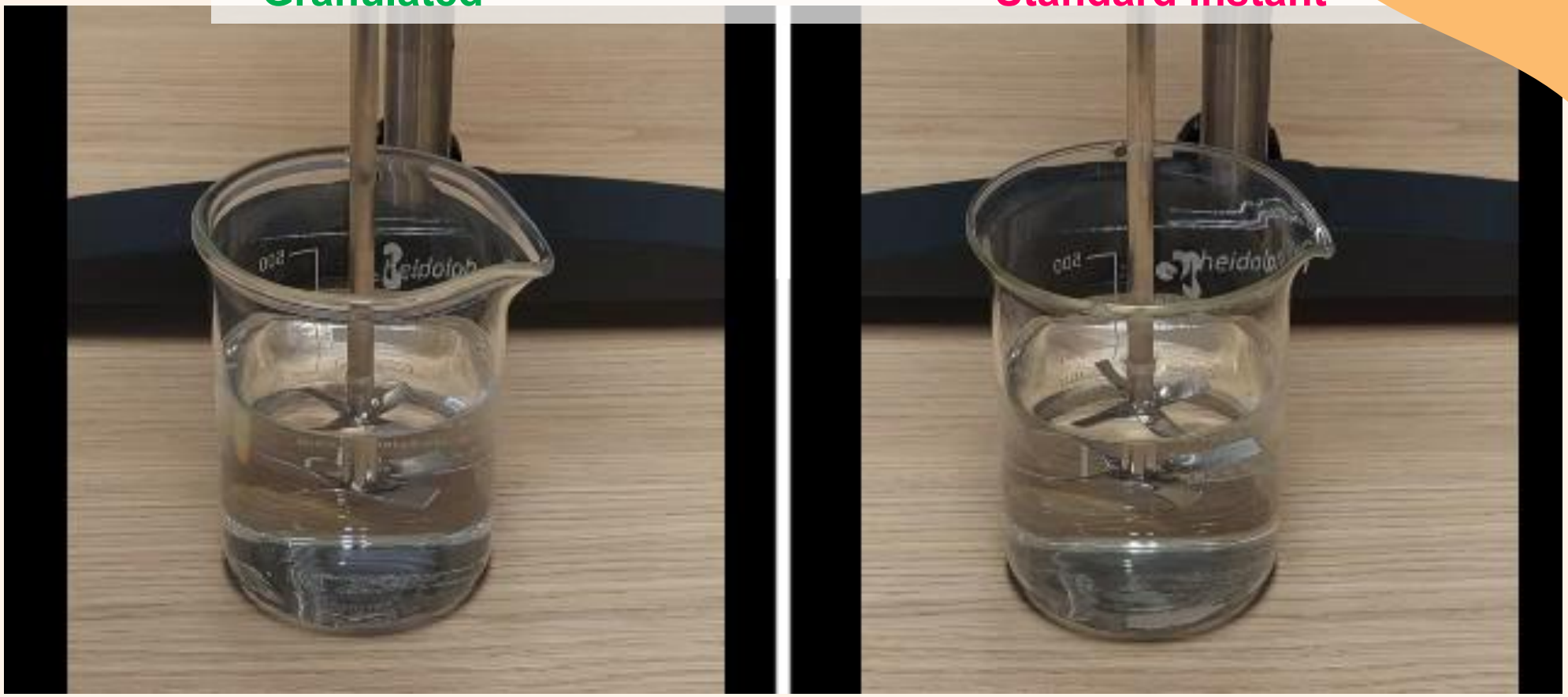


Excellent HYDRATION properties

Advantages in use

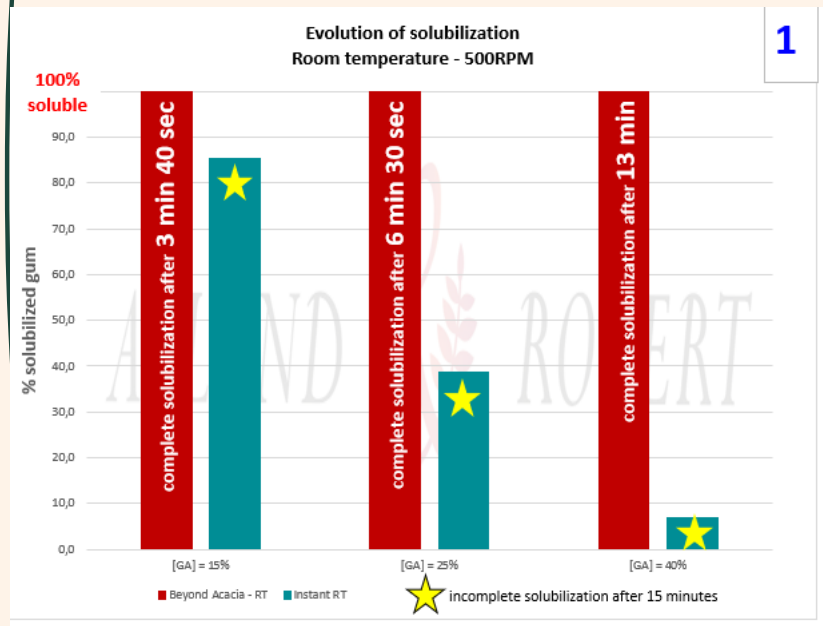
Granulated

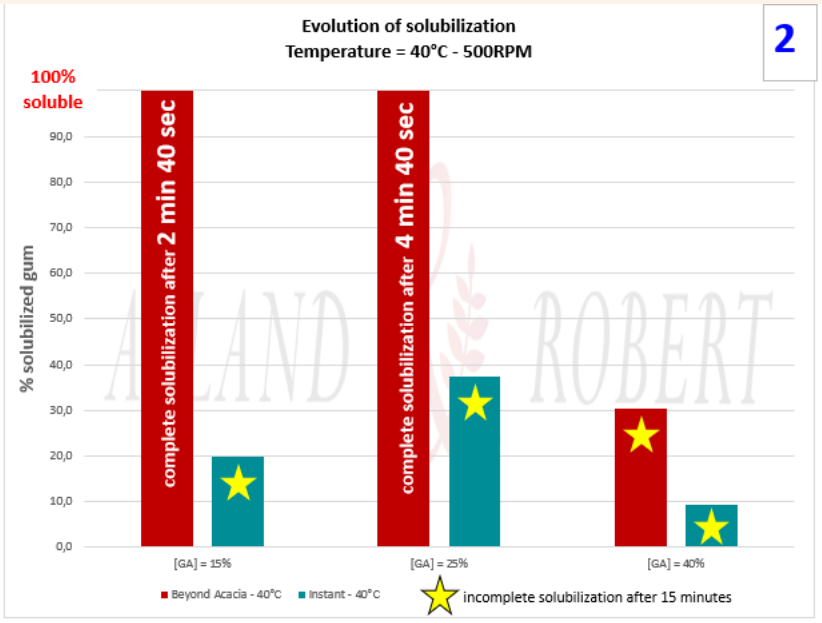
Standard Instant

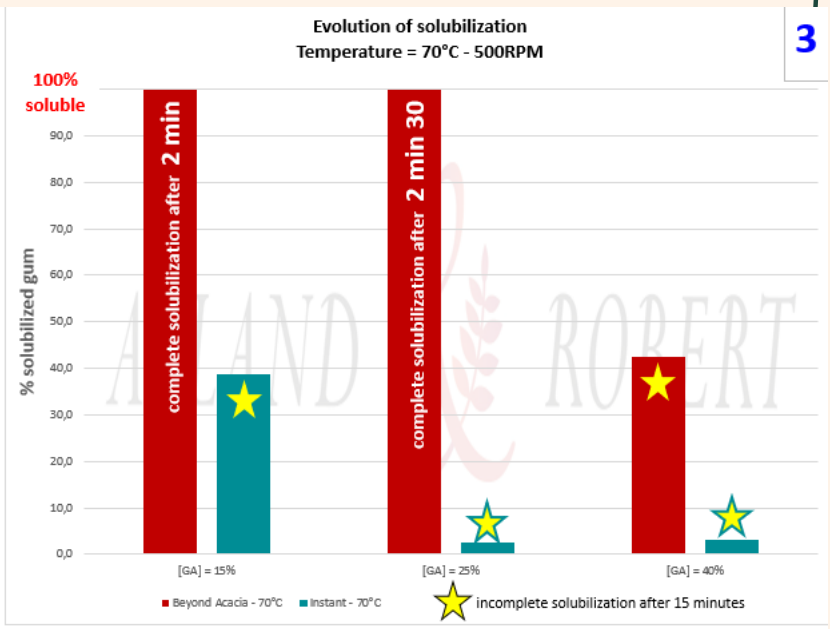


Excellent dispersion and flowability
Less lumps, low energy, less foam

Beyond vs instant



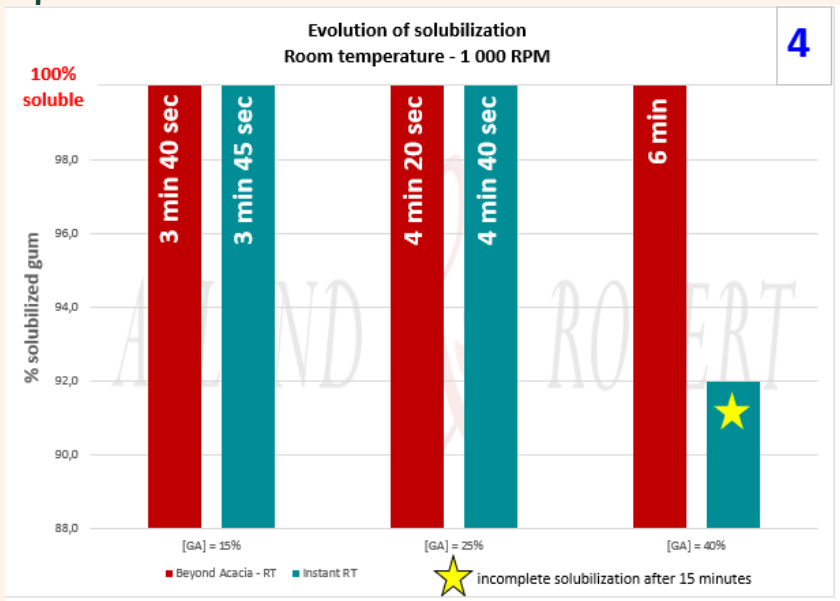


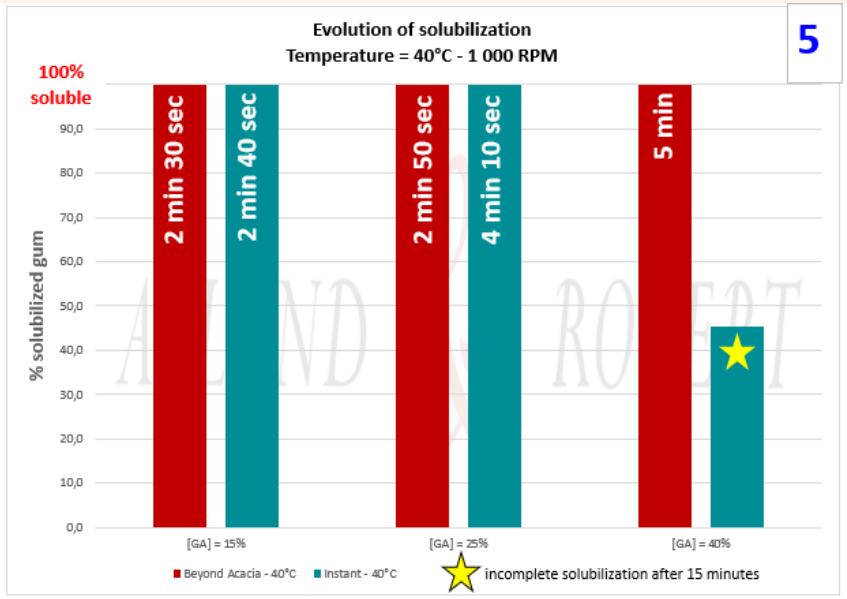


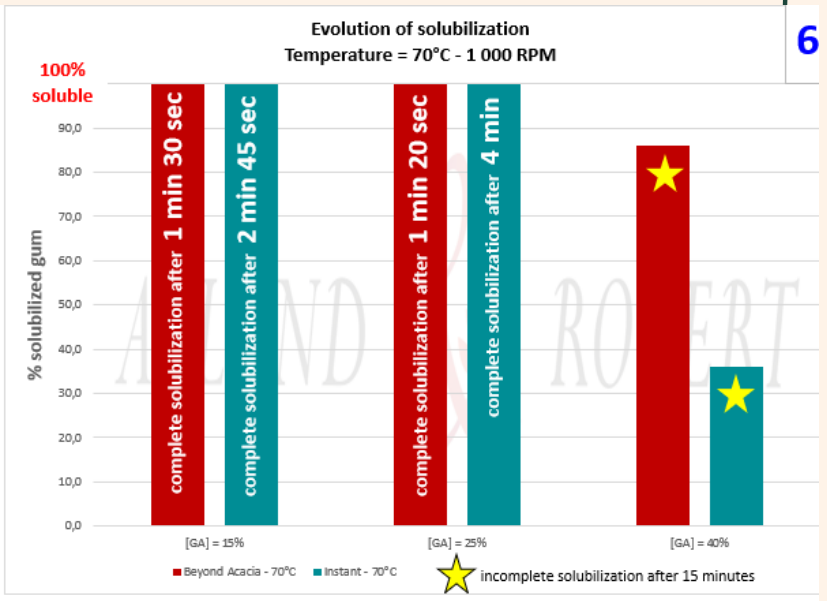
Always solubilizes faster regardless of temperature or stirring speed

At concentrations below 30%, all Beyond 100% solubilized before 15 minutes under slow stirring when no instant is

Beyond vs instant







To achieve more than 35% gum solutions: favor a quite fast stirring (1000RPM) and a moderate warm temperature (40°C) = graph 5

The application of high temperatures (approx. 70°C) penalizes the solubilization rate at high concentration (>30%) = graph 6

EXPLANATORY SHEET – with 2 examples

IMPACT OF PARTICLE SIZE ON COLOR OF POWDERS

SEYAL 381

inferior to 100µ | 100µ to 200µ | 200µ to 400µ | superior to 400µ

- ➔ Same original powder with different granulometry after pulverization and sieving
- ➔ All aqueous solutions = 8°Lov

SENEGAL 396

- ➔ Same original powder with different granulometry after pulverization and sieving
- ➔ All aqueous solutions = 5°Lov

4. APPLICATIONS

R&D DRIVERS

FUNCTIONALITY

Versatile and multifunctional 100% natural gum to improve foods

NUTRITION

More and more used for fiber enrichment and sugar reduction

HEALTH

Many health benefits
Gut health

COSMETIC

Natural, vegetal & environmental friendly solutions

DemeCare®

FUNCTIONALITY

Versatile and multifunctional 100% natural gum to improve foods

FUNCTIONAL PROPERTIES

TENSIO ACTIVE PROPERTIES

Natural or **chemically** modified emulsifier?

NATURAL ACACIA GUM

Waterloving hydrophilic head

= sugar fraction

Oil loving hydrophobic tail

= protein fraction

TENSIOACTIVE PROPERTIES

FOR THE FORMULATION OF **BIPHASE FOOD SYSTEMS**

Oil-in-water

→ **EMULSIFYING**

Air-in-water

→ **WHIPPING**

Solid-in-water

→ **SUSPENDING**

TENSIOACTIVE PROPERTIES

FLAVORS & SOFT DRINKS

EMULSIONS - OILS

- **Reduces the surface tension** between the dispersed and the continuous phases
- **Maintains small oil droplets in suspension** with electrostatic and steric effects
- **Assures the stability of the system** for many years in both concentrated and diluted conditions (flavors, beverages)

RECIPE SHEET

Acacia gum SENEGAL	20%
Water	64.5%
Citric acid	0.5%
Preservatives	Qs
Oil phase	7.5%
Estergum 8BG (weighting agent)	7.5%

MANUFACTURING PARAMETERS

Mix the 2 parts with a high speed mixer and then with a high pressure homogeneisor

ADDITIONAL INFORMATION

Wait for the complete hydration of the gum before emulsification
2 stages minimum for the high pressure step (400 bars) and the last one at low pressure (50 bars) to smooth the emulsion and separate possible aggregates

TENSIOACTIVE PROPERTIES

ICE CREAMS

WHIPPED PRODUCTS

- **Mobilizes water** ➔ improves the stabilization and final texture (smoother)
- **Syrup texture** to optimize the formulation of sugar free or sugar reduced products
- **Lowers the density** of the ice cream (➔ more air incorporated)

RECIPE SHEET

Acacia gum SENEGAL	1- 4%
Milk	41%
Liquid cream	41%
Sucrose	14-17%
Flavors, colorings	qs
Other hydrocolloids	qs

MANUFACTURING PARAMETERS

Mix the ingredients with a paddle blender and make the ice cream with adapted equipment

ADDITIONAL INFORMATION

Pasteurize the mix

TENSIOACTIVE PROPERTIES

BEVERAGES

SUSPENSIONS

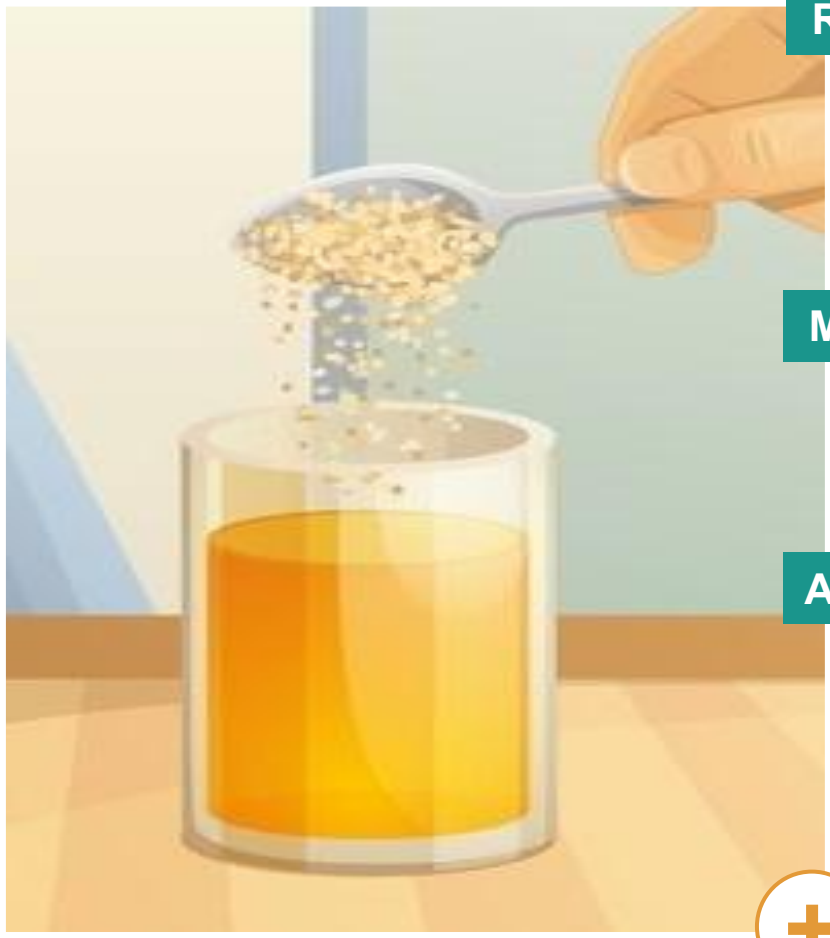
- **Favors the stabilization of solid compounds** and fat globules in aqueous systems
- **Improves mouthfeel**
- Formulation of vegetal based-beverages (milk substitutes)
- Formulation of juices containing pulps
- Fiber enrichment

TENSIOACTIVE PROPERTIES

ENCAPSULATION OF FLAVORS & POWDERED BEVERAGES

INSTANT POWDERS

- **Assures the better encapsulation of oil droplets** (essential oils, oleoresins, vitamins, flavors, colorings…)
- **Improves stability:** protects final powder from moisture and essential oils against release, loss of volatile compounds and oxidation
- Most effective neutral binder



RECIPE SHEET

Acacia gum SEYAL	**20 to 30%**
Water	**54.5 to 64.5%**
Citric acid	**0.5%**
Oil phase	**15%**

MANUFACTURING PARAMETERS

Mix the 2 parts with a high shear mixer and then with a high pressure homogeneisor

ADDITIONAL INFORMATION

- Wait for the complete hydration of the gum before emulsification
- 2 stages minimum for the high pressure step (400 bars) and the last one at low pressure (50 bars) to smooth the emulsion and separate possible aggregates

+ FILM FORMING PROPERTIES

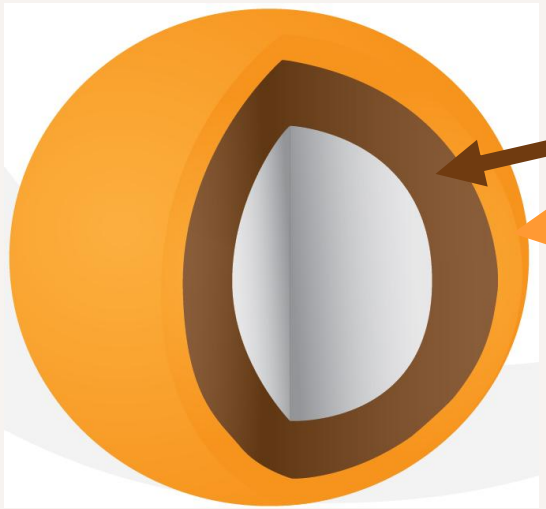
COATING
WITH SUCROSE

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

COATING

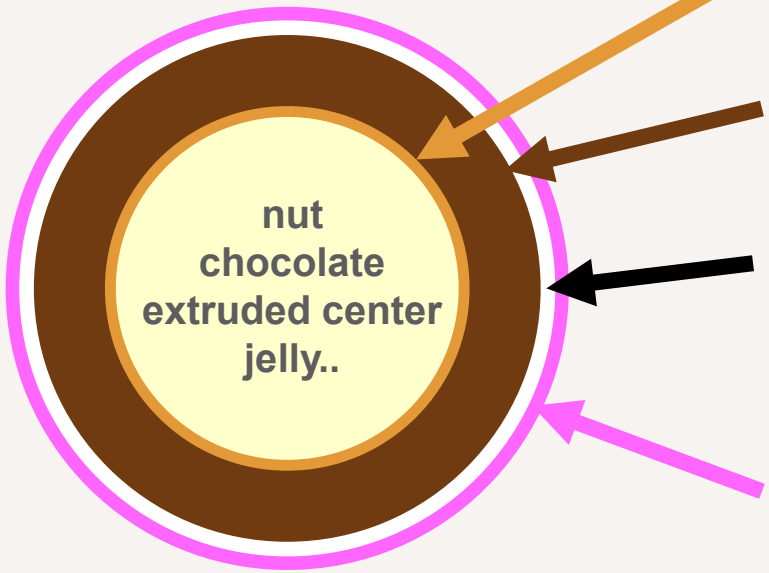
WITH CHOCOLATE AND SUCROSE

REGULAR COATING

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

MANUFACTURING STEPS



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

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	+++	+	++	+++	+++

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

Competitors
gelatine
pectins …

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

SUGAR-FREE SOFT GUM

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

Concurrent(s)
gélatine
pectines …

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**

ADHESIVE PROPERTIES

ACACIA GUM IS A **NATURAL GLUE**

A **natural glue** also used in inks, paints or paper industries

SNACKING

To protect

To stick salt, spices, flavors or aromatic herbs on centers

Favours the stickiness of cereals and final stability

To replace salt, sugar or eggs

TECHNICAL

A natural glue used in inks, paints or paper industries

TECHNO FUNCTIONAL PROPERTIES

EXTRUSION

Thermoplastic
and **lubricating** properties

PET FOOD

Favors the cohesiveness of the mix

Improves palatability, appetence

INSTANT NOODLES

Improves the texture of the noodles after rehydration

TECHNO FUNCTIONAL PROPERTIES

OENOLOGY / WINES

- **Efficient** at very low level
- Just **before bottling**

STABILIZATION

Acacia Senegal stabilizes the coloring matters thanks to reactions with polyphenols

MOUTHFEEL

Acacia SEYAL reduces aggressiveness and astringency of tanins

IMPROVING PROPERTIES

BAKERY

- **Efficient at low level**
- Combined with **nutritional fiber allegation**

WATER RETENTION

Acacia **SENEGAL** and **SEYAL** allow a **better retention of water** in breads leading to a **softer texture**

IMPACT ON SHELF LIFE

Shelf life of breads is **significantly increased**

IMPROVING PROPERTIES

SAUCES

- **Emulsification**
- Improve stability

COLD SAUCES

Fat reduction
Improvement of stability
Reduction of syneresis

HOT SAUCES

Stability to heating steps (protection against denaturation of proteins leading to grainy or curdled sauce)

5. DEVELOPMENT & STRATEGY

MASTERY AND CONSISTENCY

THE RIGHT GUM FOR THE RIGHT APPLICATION

- Raw materials and final products high level standards
- Dedicated parameters according to customers
- Selection of raw materials
- Flexible operating processing conditions
- Technical support for customers
- Academic support for R&D and customers

R&D DRIVERS

FUNCTIONALITY

Versatile and multifunctional 100% natural gum to improve foods

NUTRITION

More and more used for fiber enrichment and sugar reduction

HEALTH

Many health benefits
Gut health

COSMETIC

Natural, vegetal & environmental friendly solutions

DemeCare®

NUTRITION

More and more used for fiber enrichment and sugar reduction

ACACIA GUM: A VERSATILE INGREDIENT

ACACIA GUM: FROM FORMULATION TO NUTRITION

ADVANTAGES OF ACACIA GUM vs CURRENT TRENDS

- Easy to use (high solubility), stable to all process conditions (pH, temp)
- No taste, no color, low viscosity
- Low calorie
- Sugar free
- Substitutes the bulk of sugar
- Versatility and vegetal origin: useful tool for the formulation of animal-free foods for vegan/vegetarian diets
- A soluble fiber with prebiotic effects and high digestive tolerance
- Label-friendly: ingredient status used as a fiber

FOCUS ON SUGAR REDUCTION

HELP FORMULATION WITH a natural and vegetal polysaccharide THANKS TO ITS RHEOLOGICAL PROFILE

ADVANTAGES OF ACACIA GUM: volume, texture, mouthfeel with low glycemic index

- **Soft drinks and beverages (sugar-reduced or sugar free)**: impact on stability and mouthfeel
- **Dairies / vegetable substitutes**: loss of texture/creaminess compensated by acacia gum
- **Masking effect** / some **aftertastes** generated by sweeteners (taste buds?) – can reduce aggressivity/bitterness
- **Effective bulking agent** for the formulation of sugar-reduced food or formulated with sweeteners
- **Healthy - not digested – slow fermentation**

FOCUS ON REVEGETATION OF DIET

GELATIN FREE GUM DROPS MARSHMALLOWS

GELATIN FREE

Born from Alland & Robert expertise and Research & Development unit, Syndeo® Gelling is a blend of 3 plant-based hydrocolloids including acacia gum: for an efficient combination of their functional properties that will mimic gelatin in candies, jellies, desserts, mousses and more.

SYNDEO® GELLING, A PLANT-BASED GELLING AGENT for ultimate textures

HUNDREDS OF LAB TESTS IN ORDER TO REACH THE RIGHT TEXTURES

GUMMIES

MARSHMALLOWS

MOUSSES

- Asset : one technician specialized in gummies and candies (trained at German ZDS school)
- Tools: instrumental (texturometer) and sensorial tests
- Sensory analysis / trained internal panel
- Industrial validation done for gummies (not yet for marshmallows)

THE FORMULATION

- Blend of :

  Acacia gum – E414
  Carrageenans – E407
  Agar – E406

ALLAND & ROBERT

SPECIFICATIONS
SYNDEO® GELLING
N° Spec. 1502013
Created on : 16.03.2023
Version : 4
Last Update : 12.05.2023

1. DESCRIPTION

The **Syndeo® G** is a combination of Acacia gum, Carrageenans, Agar-agar and dextrose. Syndeo® Gelling is an effective vegan gelling agent that brings texture and mouthfeel improvement to candies, marshmallows, jellies, mousses, and other products usually formulated with gelatine.

TYPICAL DOSAGE

Gummies: 3 to 4% with 0.4% salts (to functionalize) according to the desired texture.
Marshmallows : 2.5 to 3.5% with 0.4% salts (to functionalize) according to the desired texture.
Mousses : around 1% with 0.1% salts (to functionalize) in association with 2 to 3% of vegetal proteins.

RECOMMENDATIONS

Solubility : dispersible in cold water and totally soluble over 70°C.
Functionalization and gelling : functionalized in presence of salts and after boiling a few minutes over 90°C.
Acids must be added at the end of the recipe to preserve gelling efficiency which may be altered in acid medium coupled with high temperature.

2. COMPOSITION

Ingredients : Acacia gum [E414], Carrageenans [E407], Agar-agar [E406], dextrose.

3. LEGAL REQUIREMENTS

✓ Commission Regulation (EU) No 231/2012 laying down specifications for food additives [E414], [E407], [E406] as amended.
✓ Other on request.

- Hydrocolloids commonly used in food
- Part C - Group I of REGULATION (EC) No 1333/2008 on food additives
- Carrageenan controversy : not degraded in Syndeo G

SYNDEO® GELLING, A PLANT-BASED GELLING AGENT for ultimate textures

FOR THE FORMULATION OF VEGAN GUMMIES IN USUAL INDUSTRIAL CONDITIONS

Vegan jellified candies

Ingredients (in % weight)

Water	38.4
Sucrose	19.2
Glucose syrup 40 DE	11.5
Glucose syrup 60 DE	26.9
SYNDEO® GELLING	3.1
Citric acid (E330)	0.6
Sodium citrate (E331)	0.4

Instructions

1/ Mix water, glucose syrups and sodium citrate for 2 minutes at 80°C;

2/ Add sucrose and the SYNDEO® GELLING under stirring: blend 8 minutes at 120°C;

3/ Add and mix citric acid just before starch deposit step;

4/ Deposit in starch trays and dry jellies for 72 to 96 hours at 32°C.

SYNDEO® GELLING, A PLANT-BASED GELLING AGENT for ultimate textures

FOR THE FORMULATION OF VEGAN MARSHMALLOWS

Vegan marshmallows

Ingredients (in % weight)

BLEND 1	
Water	18.5
Sucrose	18.5
Glucose syrup 40 DE	11.9
Glucose syrup 60 DE	27.9
SYNDEO® GELLING	2.9
Sodium citrate (E331)	0.4
BLEND 2	
Water	9.2
Sucrose	9.4
Potato proteins	1.2

Instructions

1/ Blend 1: mix all the ingredients with a powerful heating mixer (speed 7) for 5 minutes at 120°C;

2/ Blend 2: mix all the ingredients with a powerful heating mixer (speed 7) for 5 minutes at 70°C;

3/ Mix the 2 blends with the mixer with a lower speed (3) for 2 minutes;

4/ Deposit in starch trays and dry marshmallows at least 24 hours at 32°C.

SYNDEO® GELLING, A PLANT-BASED GELLING AGENT for ultimate textures

FOR THE FORMULATION OF VEGAN MOUSSES

Vegan mousses

Thanks to Syndeo® Gelling, replicating the mouthfeel and texture of a regular mousse as a delicious vegan mousse is possible. Whether chocolate or fruit mousse, Syndeo® Gelling provides consumers with a creamy but not fatty mouthfeel and great sensory experience, including the softness, light and airy texture.

Vegan mousses

Ingredients (in % weight)

BLEND 1	
Water	20
Vegetal protein	2.5
Icing sugar	2.5
BLEND 2	
Mango puree	37
Coconut milk	37
Sodium citrate (E331)	0.13
SYNDEO® GELLING	0.87

Instructions

Blend 1:

1/ Mix water and vegetal protein for 2 min at speed 5;
Whisk for 2 min at speed 8;
Add icing sugar and mix for 30 sec at speed 5;
Whisk for 2 min at speed 8;

Blend 2:

2/ Mix all the ingredient together for 1 min at speed 3;
Heat 90°C for 3 min at speed 3;

3/ Mix slowly together with a spatula until getting an homogeneous mousse;

4/ Pour into small glasses and refrigerate for at least 4 hours.

SYNDEO® GELLING,
A PLANT-BASED GELLING AGENT
for ultimate textures

GENERAL CONSIDERATIONS

Highlights

Syndeo® G dosing compared to gelatin :

2 to 3 times less

depending on the final product

- Necessitates salts (Na+) to be functionalized
- Easy to dissolve (needs minimal temperature)
- May withstands high temperature and acidic conditions compared to gelatin much more sensitive
- The Bloom notion in reference to the setting strength of gelatin is not applicable to Syndeo® G.

SYNDEO® GELLING,
A PLANT-BASED GELLING AGENT
for ultimate textures

GENERAL CONSIDERATIONS

Next steps

- Chewy candies whipped with gelatin
- Dairies : yoghurts
- Chilled desserts included plant-based trends : pannacottas, creams (spoonable or creamy)

SYNDEO® GELLING,
A PLANT-BASED
GELLING AGENT
for ultimate textures

GENERAL CONSIDERATIONS

Conclusion

- Mastery of new hydrocolloids in our lab
- Look forward to receiving feedback from you and potential customers (about gummies)
- A&R technical support to develop new formulas with our Syndeo® Gelling

FIBER ENRICHMENT

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 the Acacia Gums of ACACIA FIBRE range**

Fiber enrichment with Acacia Gum
can allow nutritional allegations
according to the dosage (« source of »/ « enriched or high in fibers ») and **according to the regulation of every country.**

ACACIA FIBRE = a high soluble dietary fiber

- **FUNCTIONALIZING : no devaluation of the matrix - many improvements thanks to gum properties**
- **CLEAN LABEL : Acacia Fiber**
- **NUTRITION :**
  ➔ Helps formulation of trendy foods (animal-free substitutes, sugar reduction)
  ➔ Fiber claims / impact on Nutri-Score

FIBER ENRICHMENT

substitutes
formulation

NUTRITION

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**	**Low** calorific value	**Very low** glycemic index
No side effect, discomfort or **stomach issues**	PH **compatible** with milk proteins	Scientifically **recognized** prebiotic effects
Neutral taste with **very low viscosity**	**Positive effect** on rheology	**Non cancerogenic** effect

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

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ACACIA FIBRE STATUS → REFER TO LOCAL REGULATION

Example of EUROPE (Regulation (EU) No 1047/2012):

→ **Nutrition claims applicable**

- **SOURCE OF FIBRE : at least 3 g of fibre per 100 g or at least 1,5 g of fibre per 100 kcal**
- **HIGH FIBRE : at least 6 g of fibre per 100 g or at least 3 g of fibre per 100 kcal**

R&D DRIVERS

FUNCTIONALITY

Versatile and multifunctional 100% natural gum to improve foods

NUTRITION

More and more used for fiber enrichment and sugar reduction

HEALTH

Many health benefits
Gut health

COSMETIC

Natural, vegetal & environmental friendly solutions

DemeCare®

HEALTH

Many health benefits
Gut health

ACACIA FIBRE – Health benefits

EXTENSIVELY DESCRIBED IN LITERATURE

Prebiotic effects : promotes the growth of beneficial gut bacteria improving microbiota

Blood glucose management / insulin response

Beneficial effects on chronic renal failures

Positive effect on IBS (Irritable Bowel Syndrome)

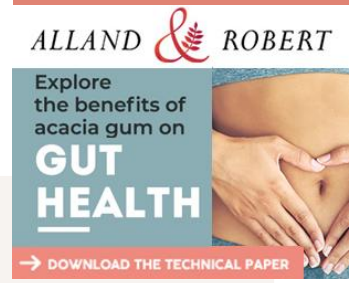
Improves intestinal conditions (pH, SCFA production) and functions

Improve gut impermeability

Weight management (satiety)

HEALTH

ACACIA FIBRE – Gut health



ALLAND & ROBERT STUDY

ACACIA GUM IS:

- ✔ Natural
- ✔ Vegetal
- ✔ Clean Label
- ✔ A soluble fiber
- ✔ A prebiotic
- ✔ Sustainable

LABELLING:

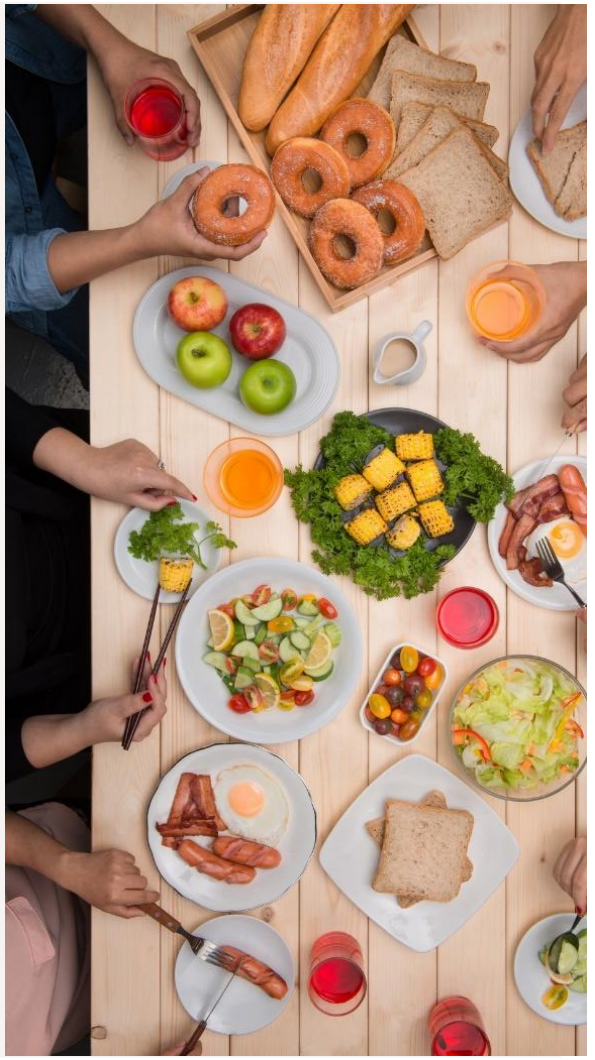
- ✔ Acacia Gum / Gum Acacia
- ✔ Acacia Fiber
- ✔ Gum Arabic
- ✔ E414

Please check local legislation for labelling options.

- Get consumer insight and sensory marketing on Acacia Gum
- Describe the benefits of Acacia Gum in digestive health
- Explore the impact of a daily intake of Acacia Gum on the daily life of consumers
- Support the use of Acacia Gum as a gut health improver

ACACIA GUM : functionality, sugar reduction, nutritional claims and digestive health

- 100% veggie and natural
- Sustainable and positively perceived
- Already used all over the world in many foodstuffs
- Very easy to incorporate and neutral
- No chemically modified
- Affordable – competitive
- Efficient to improve and formulate sugar reduced foods (texture, stability, taste …)
- Suitable for many diets : vegan, keto, nutrition, organic, healthy ➔ technical and health benefits
- Allows nutritional allegations (fiber enrichment)



R&D DRIVERS

FUNCTIONALITY

Versatile and multifunctional 100% natural gum to improve foods

NUTRITION

More and more used for fiber enrichment and sugar reduction

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Natural, vegetal & environmental friendly solutions

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APPLIED RESEARCH IN COSMETICS

Natural and organic gums…

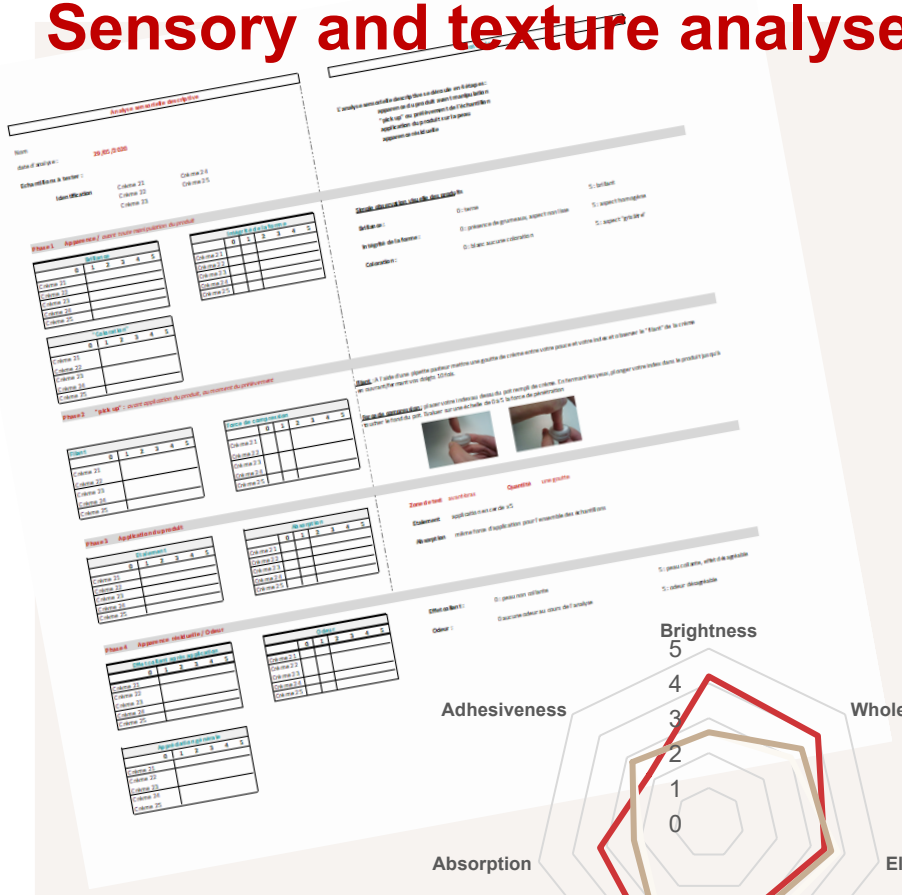
… are considered natural and safe by formulators.

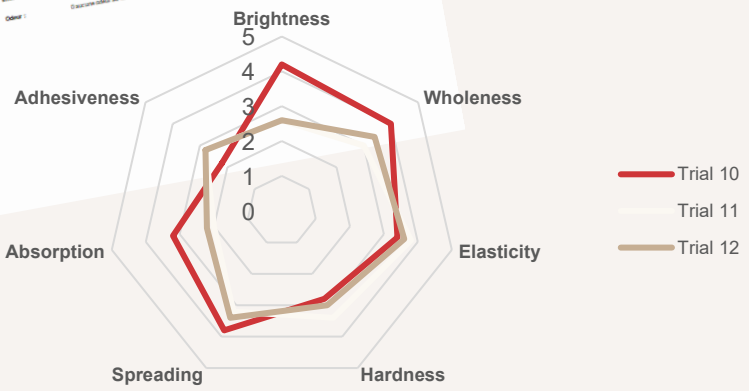
… provide **stability** and **texture** to cosmetics, thanks to their viscosity, and functional properties on rheology and texture.

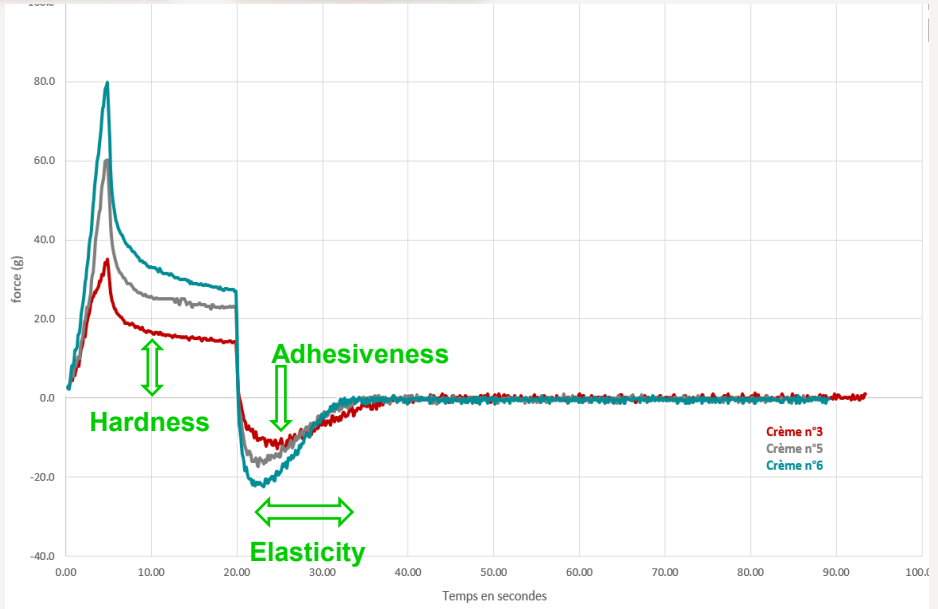
… can be used as **emulsifiers** in lotions or serums (for specific formulations).

TOOLS FOR APPLIED RESEARCH IN COSMETICS

Sensory and texture analyses







NEW RANGE OF NATURAL GUMS

DemeCare

#IDENTITY SHEET

WHAT ARE NATURAL GUMS?
INTRODUCING ACACIA AND KARAYA GUMS

ACACIA GUM

Acacia gum is an exudation of the acacia tree obtained by cutting the trunk or branches. There are 2 varieties of acacia gum: senegal and seyal, which have different functional properties.

- Biodegradable
- Vegetal
- 100% natural
- Organic
- Sustainable
- Texturing agent
- Film-forming agent
- Emulsifier

INCI : ACACIA SENEGAL GUM and ACACIA SEYAL GUM

Acacia gum has received the maximum rating according to the ISO 16128 Standard (which defines the ingredients of natural and organic cosmetics).

- Easily dissolved in hot or cold liquid
- Solubilisation up to a 40% concentration
- Fluid texture, Newtonian behaviour
- Stable over a wide pH range (4 to 10)
- Resistant to temperature variations
- Newtonian fluid

KARAYA GUM

Karaya gum is a natural exudation obtained by cutting the trunk or branches of the Sterculia tree.

- Biodegradable
- Vegetal
- 100% natural
- Organic
- Sustainable
- Texturing agent
- Film-forming agent
- Emulsifier

INCI : STERCULIA URENS GUM

Karaya gum has received the maximum rating according to the ISO 16128 Standard (which defines the ingredients of natural and organic cosmetics).

- Strong water absorption capacity
- Gelling agent – thick to fluid texture
- Hot or cold dispersion (facilitated in the presence of glycerine or ethanol)
- Stable over a wide pH range (4 to 10)
- Shear thinning gels
- Good resistance to temperature variations
- Newtonian fluid

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DemeCare

#PRODUCT BENEFITS

TO EACH COSMETIC, ITS OWN GUM

THE DemeCare® RANGE	Texturing	Tightening effect	Adhesion agent	Binding agent	Emulsion stabiliser	"Suspension" agent	Film-forming agent	"Silky effect"	Shine	Moisturising effect
Acacia senegal I	✔	✔	✔	✔	✔	✔	✔		✔	✔
Acacia senegal S	✔	✔	✔	✔	✔	✔	✔		✔	✔
Acacia senegal IO	✔	✔	✔	✔	✔	✔	✔		✔	✔
Acacia senegal SO	✔	✔	✔	✔	✔	✔	✔		✔	✔
Acacia seyal I	✔	✔	✔	✔	✔	✔	✔			✔
Acacia seyal S	✔	✔	✔	✔	✔	✔	✔			✔
Acacia seyal IO	✔	✔	✔	✔	✔	✔	✔			✔
Acacia seyal SO	✔	✔	✔	✔	✔	✔	✔			✔
Sterculia Gum	✔			✔	✔	✔		✔		
Sterculia Gum O	✔			✔	✔	✔		✔		
Blend Acacia senegal I / Sterculia Gum	✔				✔	✔		✔		
Blend acacia senegal IO / Sterculia gum O	✔				✔	✔		✔		

I : Instant soluble S : Spray-dried O : Organic

All products are available in 25kg bags. Other packaging is available on request.

ALLAND & ROBERT'S DEMECARE® RANGE: COMPLETE AND DIVERSIFIED

The Demecare® range developed by Alland & Robert consists of twelve products made from two natural gums: karaya gum and acacia gum, which itself can come from two different varieties: Acacia senegal gum, which is the most used in cosmetics and Acacia seyal gum. The name of the range was chosen for its readability and ease of pronunciation internationally. The first part of Demecare® comes from Demeter, the name of the Greek Goddess of the Earth, and underlines the range's natural aspect. In fact, natural gums are tree exudates: products that come directly from the land, which have not been chemically modified either by Alland & Robert or at any time during the manufacturing process. The 'care' suffix conveys the notion of caring, attentiveness and trust in others.

ALLAND & ROBERT

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6. WHAT IS KARAYA GUM?

1. HIGH SAFETY INGREDIENT

E416

2. HIGH VISCOSITY

At low concentration

3. VEGETAL, NATURAL, GMO FREE

4. SYNERGY WITH OTHER HYDROCOLLOIDS

5. MUCILAGE IN WATER

6. LOW CALORIFIC VALUE

Coming from
Sterculia trees

FOR **PHARMA** & **COSMETICS**

1. **SWELLING Agent**
2. **Emulsifier**
3. **Texturing Agent**
4. **Stabilizer**
5. **Thickener**
6. **Soluble Fiber**

FOR **FOOD** & **DIETARY PRODUCTS**

- Dietary supplements
- Slimming products
- Desserts
- Emulsified sauces
- Fillings, toppings, coatings
- Snacks

No Acceptable Daily Intake specified
(FAO / WHO JECFA, 1988)

When formulating with **KARAYA GUM**, please check your country legislation and GFSA online Codex Alimentarius:

7. COMPETITION

ACACIA GUMS FROM COMPETITION

- **NEXIRA**
  - Instantgum and Spraygum → regular
  - Eficacia and Superstab → enhanced qualities
  - Fibregum L or B → acacia fibres
  - Inavea → new denomination
- **INGREDION - TIC GUMS**
  - Prehydrated and Pretested gum acacia
  - Ticamulsion → chemically modified gum acacia E423
  - Ticapan → modified starch
  - Ticaloid → specialities
- **AGRIGUM**
  - AgriSpray and AgriRapid

ACACIA GUMS FROM COMPETITION

- **NOREVO**
  - Quickgum
- **DRYTECH**
  - Aragum
- **WILLY BENECKE**
  - 4 figures : 4764 – 4699 …
- **KERRY**
  - TH031
  - Emul Plus
  - Emulgold

8. MARKETING & COLLABORATION

NEWSLETTERS

All our news are sent through newsletters made for our distributors' network. Make sure you are subscribed!

DISTRIBUTOR'S AREA

A dedicated access for our distributors with the possibility to download:

- marketing supports (recipes, technical sheets, brochures, old newsletters, etc)
- quality documents (certificates)

If you don't have an account, please contact us!

SOCIAL MEDIA

Alland&Robert

All questions related to marketing, communications & collaboration:
Violaine & Juliette
marketing@allandetrobert.fr

SRS FORMS

Has to be filled for every sample request

Will allow Alland & Robert to better process your request and gives us important information to provide you with the best suited sample.

Please give us as much information on the type of sample you need (color, powder caliber, etc…), but give us only verified information.

We expect FEEDBACK on the samples.

Sample boxes can be discussed if necessary

Always submitt samples in
unopened original Alland & Robert containers & labels
in order to avoid any contamination

ALLAND & ROBERT CONCLUSION : WHAT WE STAND FOR

A **strong expertise** on acacia gum thanks to a **dedicated R&D team**, research programs and exclusive partnerships with globally recognized universities.

Production and laboratory that reach the **highest quality standards** through international certifications.

A commitment to develop the quality of products through **sustainable development, social investment** and **environmental awareness**.

Solid partnerships with **our African suppliers** and local investment in developing communities related to gum acacia.

Commercial :
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Q & A