

## Quick Mannan TR

Natural thickener

#### Contents

- 1. Quick Mannan TR properties
- 2. Viscosity tolerance
- 3. Synergy
- 4. Applications

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## 1. Quick Mannan TR properties

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## **Process of regular Konjac**

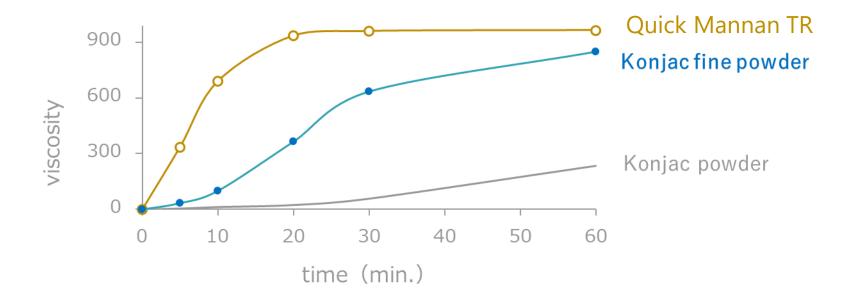
Obtention process by pulverizing Konjac potato



The traditional manufacturing process was very simple.

### **Dissolution**

Konjac powder dissolves very slowly into liquid



A slow dissolution speed leads to a low risk of lump. Refined powder can be obtained by separating the starch from the Konjac powder.

## **Gelling**

Form a gel under alkaline conditions



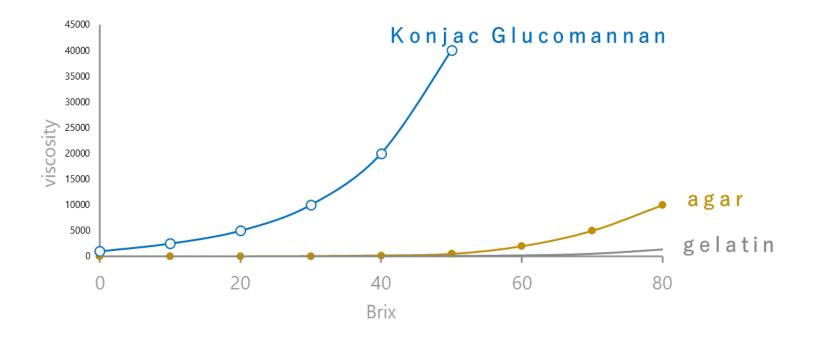
The gel formed is heat stable.

### **Mechanism**

The gel forming process at a molecular scale

### **Mechanism**

Viscosity VS Brix



Shows very high viscosity even in high BRIX conditions.

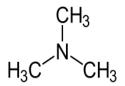
## **Caution about regular Konjac**

General Konjac gels are not resistant against acid

Glucomannan carries its own enzyme which disassemble itself and lose viscosity

General Konjac powders have a unique smell

Konjac powder has a unique and strong smell alike raw fish, caused by the action of the disassembling protein



**Trimethylamine** 

General Konjac have a high number of bacteria



Due to 2 things: the raw material is harvested from the ground & the manufacturing process is very simple

Heat or ethanol treatment is necessary to control the bacteria number







Low Smell



Low amount of Bacteria

### **Features VS Xanthan Gum**

#### **REGULAR KONJAC**

- 1 Water soluble
- 2 Low risk of Lump
- **B** High Viscosity
- 4 Low Stringiness

#### **Quick Mannan TR**

- 1 Water soluble
- Low risk of Lump
- **3** High Viscosity
- 4 Low Stringiness

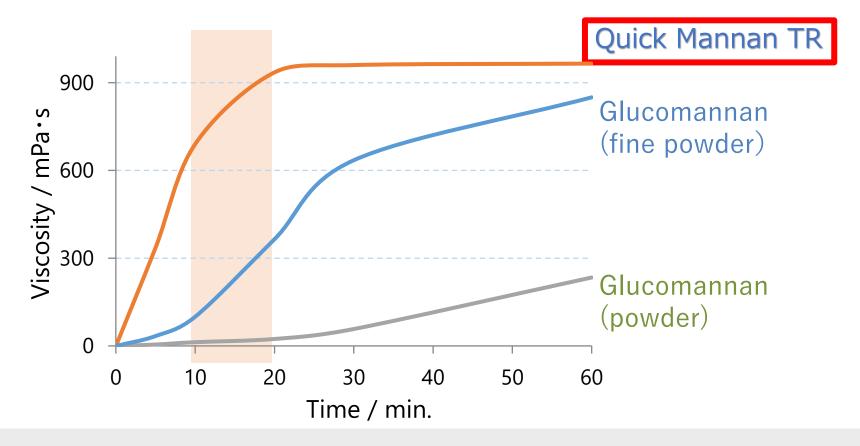
- 5 Low amount of Bacteria
- 6 Stable Viscosity
- **7** Low Smell



## **Quick viscosity appearance**

Viscosity will be in maximum figure in  $10\sim20$ min.

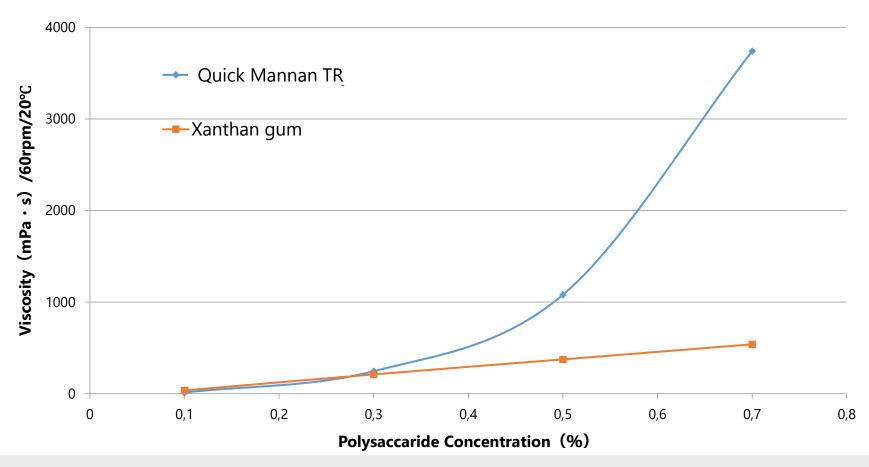
➤ (0.5% concentration)



Quick Mannan TR has excellent viscosity properties in a very low amount of time

## Viscosity according to concentration

#### Viscosity



## **Viscosity appearance**

Quick appearance of viscosity.

#### Beginning



Regular Glucomannan

Quick **Mannan TR** 



Stirring



Regular Glucomannan

Quick **Mannan TR** 







Regular Glucomannan

Quick **Mannan TR** 

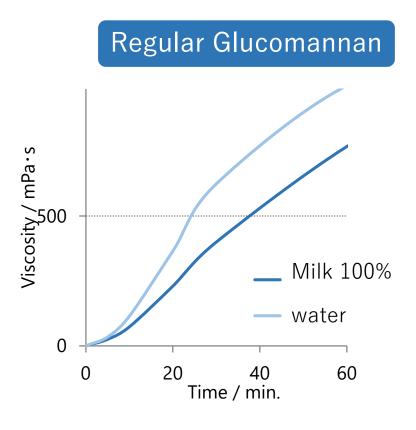


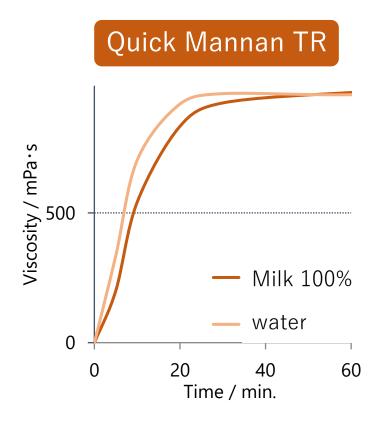
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## Milk (Ca) tolerance

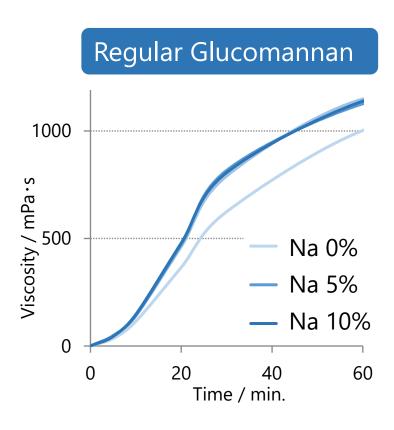
Express high and stable viscosity

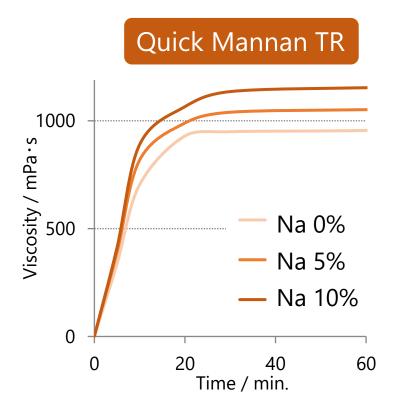




## Salt (Na) tolerance

Express high and stable viscosity





### Viscosity tolerance

### **Other tolerances**

> pH tolerance : 5 to 9

Alcohol tolerance :

- 1 Reaction with alcohol
  - No reactions are found between alcohol, sugar alcohol and polyalcohol so far.

## Other influences

- When alcohol content is above 30%, alcohol prevents Quick Mannan TR from absorbing water which leads to low viscosity.
- When solid content is above 30% viscosity will be low just like the situation with alcohol.

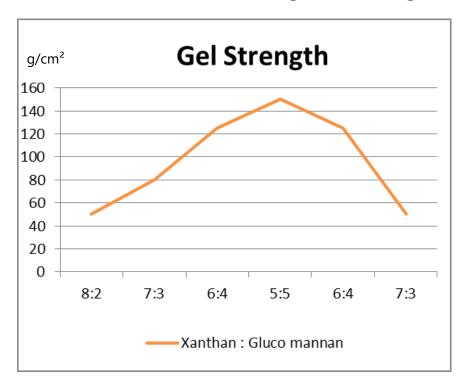
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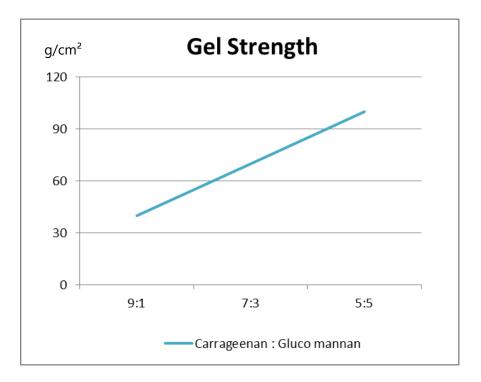
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## **Hydrocolloid reaction**

With Xanthan Gum and Carrageenan

- \*Both reaction require heat above 90°C to form gel
- \*Ratio of 5 : 5 shows highest strength





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## **Applications**







## **Sponge Cake**

Basic recipe	20% additional water recipe	20% additional water recipe with Quick Mannan TR
Whole egg 200 g Sugar 100 g Flour 100 g Butter 30 g	Whole egg 200g Sugar 100g Flour 100g Butter 30g Water 20g	Whole egg 200g Sugar 100g Flour 100g Butter 30g Water 20g Quick Mannan TR 0.5 g
*Texture : Dry and partially hard. *Height : Good	*Texture :    Soft and moistured  *Height :    Low because of adding excess water	*Texture: Soft and moistured  *Height: High enough by Quick Mannan TR's effect

### **Applications**

### Cake

#### **GOOD** effects

- Keep moisture and height
- PREVENT fruits inside to sink.

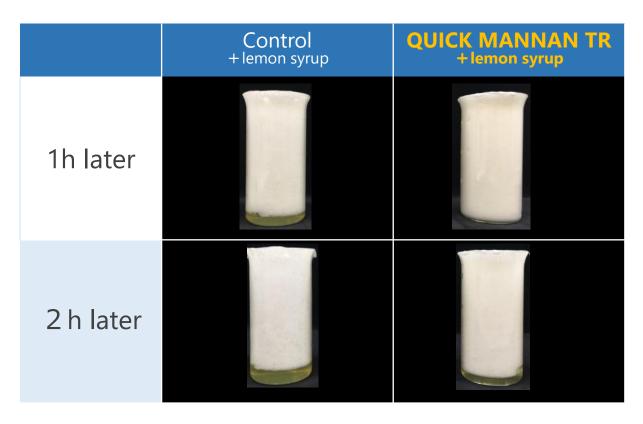


- ①Add extra  $10\sim20\%$  amount of water to your basic recipe
- ②Add 0.5% of Quick Mannan TR against flour weight.

## **Applications**

## Merengue

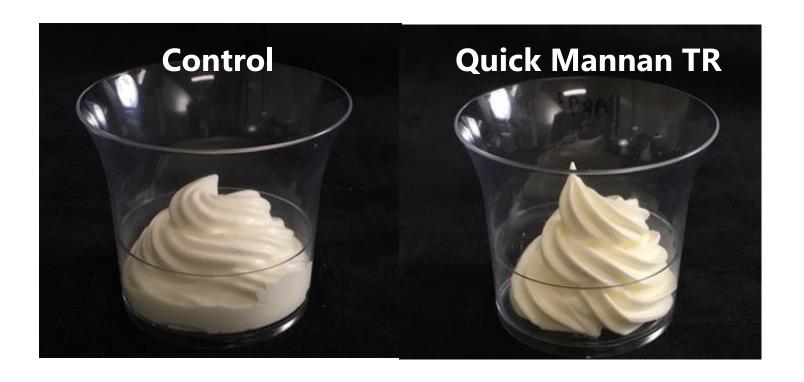
QUICK MANNAN TR work as a stabilizer



Dosage of QUICK MANNAN TR 0.5%

## Whipped cream

Quick Mannan TR works as a stabilizer



Dosage of Quick Mannan TR 0.5%

# Thank you very much

for your continuous support to IWASE COSFA

### Contact us

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