

TOA SPR-2(N)

Natto resin

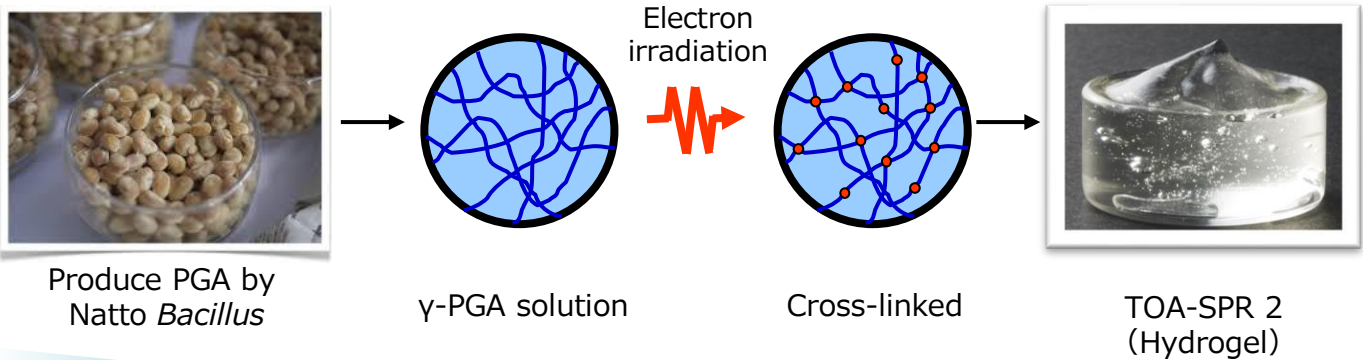
- 100% natural origin made by Natto bacillus
- Silky feeling as a texture modifier
- Thickener and viscosity enhancer
- Superior moisturizing ability



1. Composition

Product name	Main ingredient	composition	
TOA SPR-2(N)	Sodium polygama-glutamate	Sodium polygama-glutamate	2%
		1,3-butylene glycol	2%
		Caprylyl Glycol	0.5%
		Propanediol	0.5%
		Water	95%

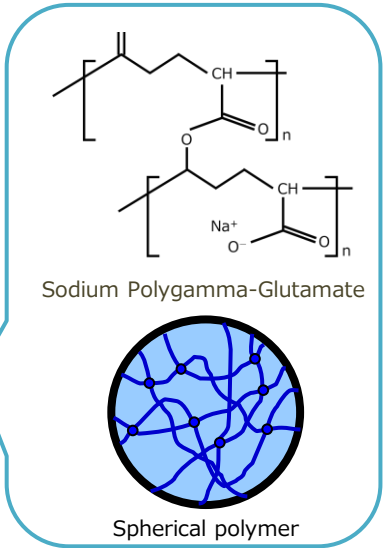
2. Production flow



3. Structure

Structure image of each materials

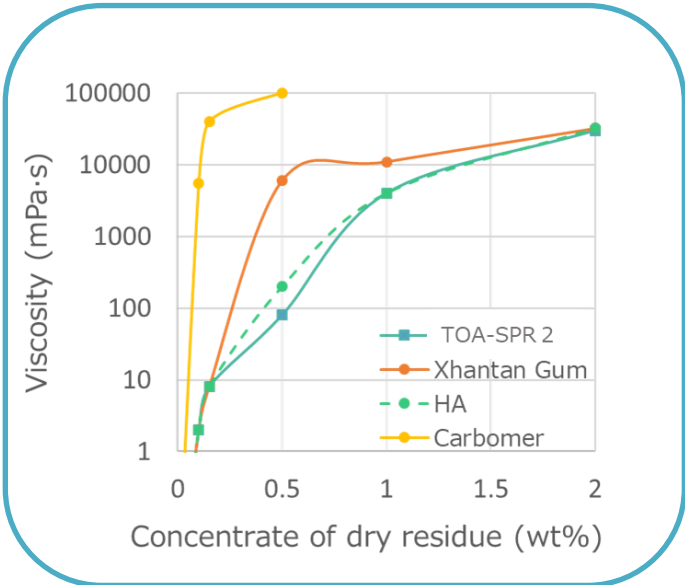
	Synthetic			
	Electrostatic repulsion	Carbomer (Acrylic acid polymer)	Intertwingle	Polyethylene glycol
		Watery		Sticky
Natural	Chain-like	Xanthan gum Hyaluronic acid	Particulate gel	TOA-SPR2
		Sticky		Silky absorb feeling



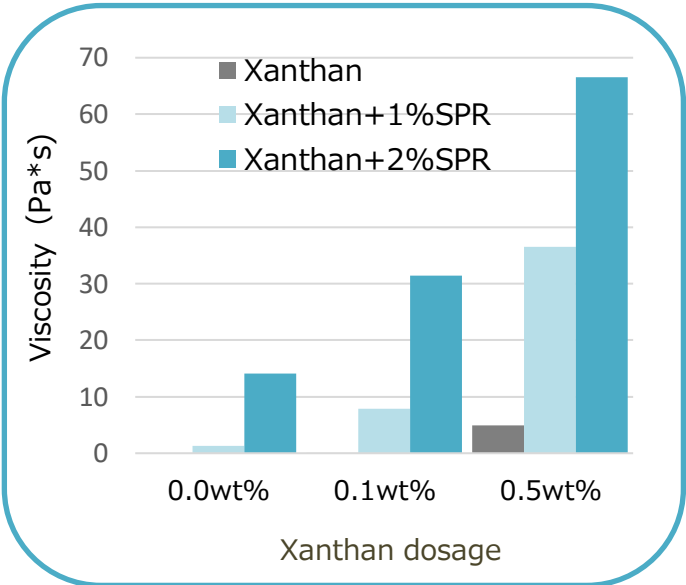
Crosslinking shortens the distance between chains, making it easier for polymer chains to aggregate. This results in a spherical polymer.

3. Function

■ Viscosity enhancer



Test 1. Comparison with other



Test 2. Combination with Xanthan gum

4. Cream formulation

#	INCI Name	Function	A (%)	B (%)
A	Water	Base	72.9	62.9
A	glycerin	moisturizer	3	3
A	Acrylates/Beheneth-25 Methacrylate Copolymer, water	thickener	1.5	1.5
B	Potassium Hydroxide	pH adjuster	0.1	0.1
C	Glyceryl Stearate, PEG-100 Stearate	emulsifier	3	3
C	Cetearyl Alcohol	moisturizer	3.5	3.5
C	Squalane	Oil	5	5
C	Isononyl Isononanoate	Oil	5	5
C	Caprylic/Capric Triglyceride	Oil	5	5
D	Caprylyl Glycol, Propanediol	Preservative	1	1
E	TOA-SPR2	texture modifier		10
			100	100



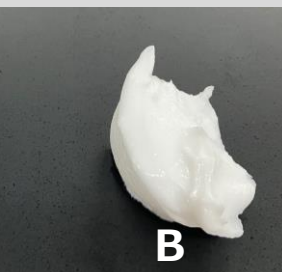
A

pH: 6.85

34,700 cPs (No.4 6rpm)

Shiny

Creamy



B

pH: 6.50

119,900 cPs (No.3 3rpm)

Matte

Mousse-like whipped cream

1. Add phase A one by one and heat to 70-75 °C to dissolve uniformly.
2. Gradually add phase B to phase A for neutralization. Continue stirring for 10 minutes.
3. Gradually add phase C and emulsify.
4. Cool to 45°C.
5. Gradually add D and E.
6. Cool to 30°C with stirring.