

# TIC Gums

Carrageenan Alternative-Ticaloid PRO<sup>®</sup> 148 OG  
Clean Label Conference, March 28-29, 2016



**TIC GUMS**  
We're your Gum Guru



## Ticaloid PRO<sup>®</sup> 148 OG

- Blend of Gellan & Organic Locust Bean Gum
- Designed for protein beverages
- Provides clean label stability
- Enhances texture of the product
- Provides product consistency in production

## Ticaloid PRO<sup>®</sup> 181 AG

- Blend of Gellan & Gum Acacia
- Designed for non-dairy beverages
- Provides clean label stability and texture
- Provides processing efficiency
- Creates stable emulsions allowing removal of soy lecithin
- Suitable for use in no sugar added and sugar free products

**TIC GUMS**

# Ticaloid Pro 148 OG

Texture + Stability Solutions



# Formulation

## HIGH-PROTEIN CINNAMON OAT RTD BEVERAGE

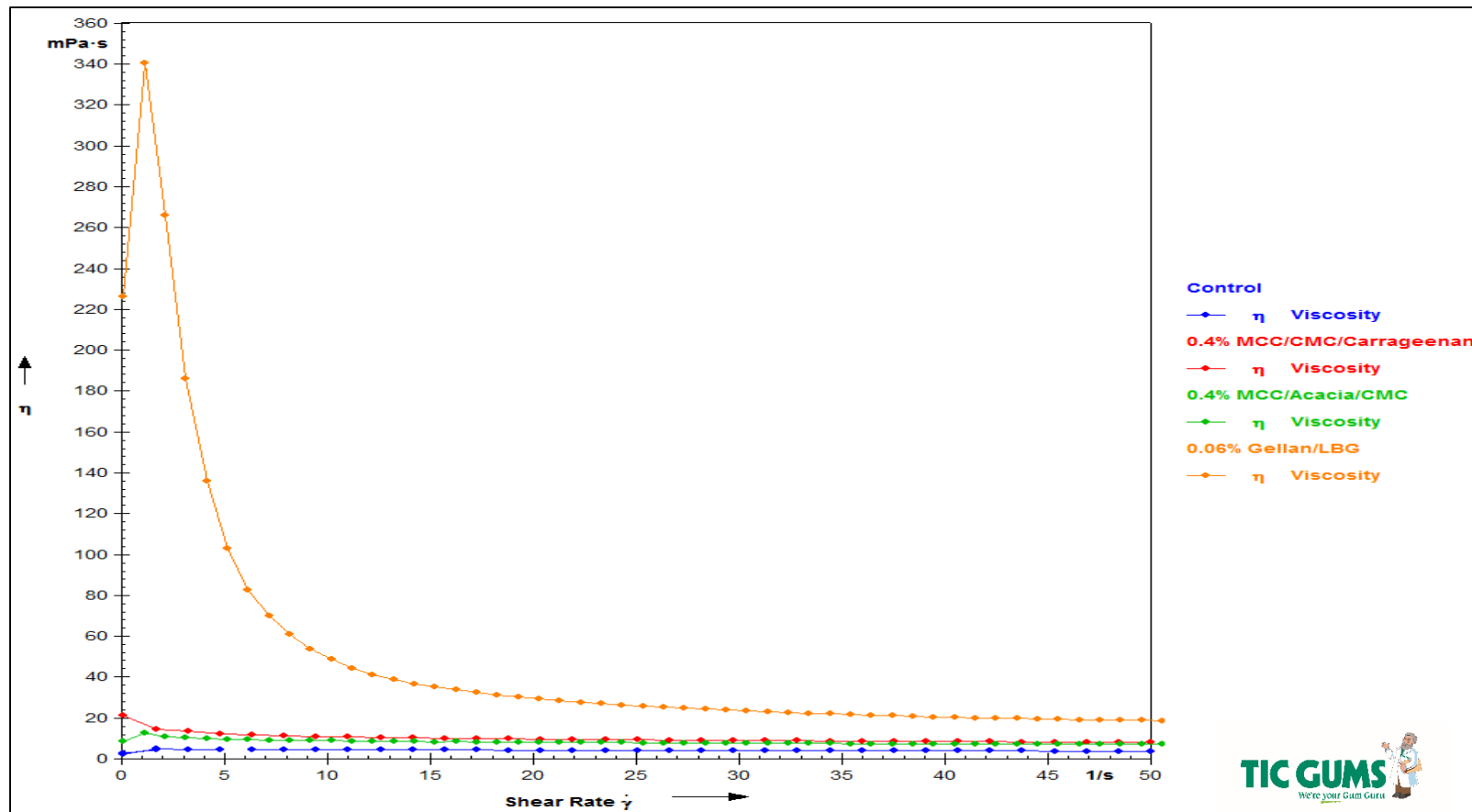
INGREDIENTS	%	
Water		66.64-66.98
Whole Milk		19.00
Milk Protein Concentrate (80)		3.80
Sugar		8.00
Oat Powder		2.00
Stabilizer		0.06-0.40
Vanilla Extract		0.10
Cinnamon		0.03
Salt		0.03
<b>Total</b>	<b>100.00</b>	

### PROCEDURE

- Add water to tank and begin mixing. Add the stabilizer to the tank and mix 7 minutes.
- Add milk protein concentrate and mix additional 30 minutes.
- Add whole milk, sugar, oat powder, vanilla, cinnamon and salt to the tank and mix additional 15 minutes.
- UHT Process: preheat 160°F, final heat 285°F for 3 seconds, homogenize 2500 psi total (2000/500).
- Collect cold under sterile hood into sterile bottles.

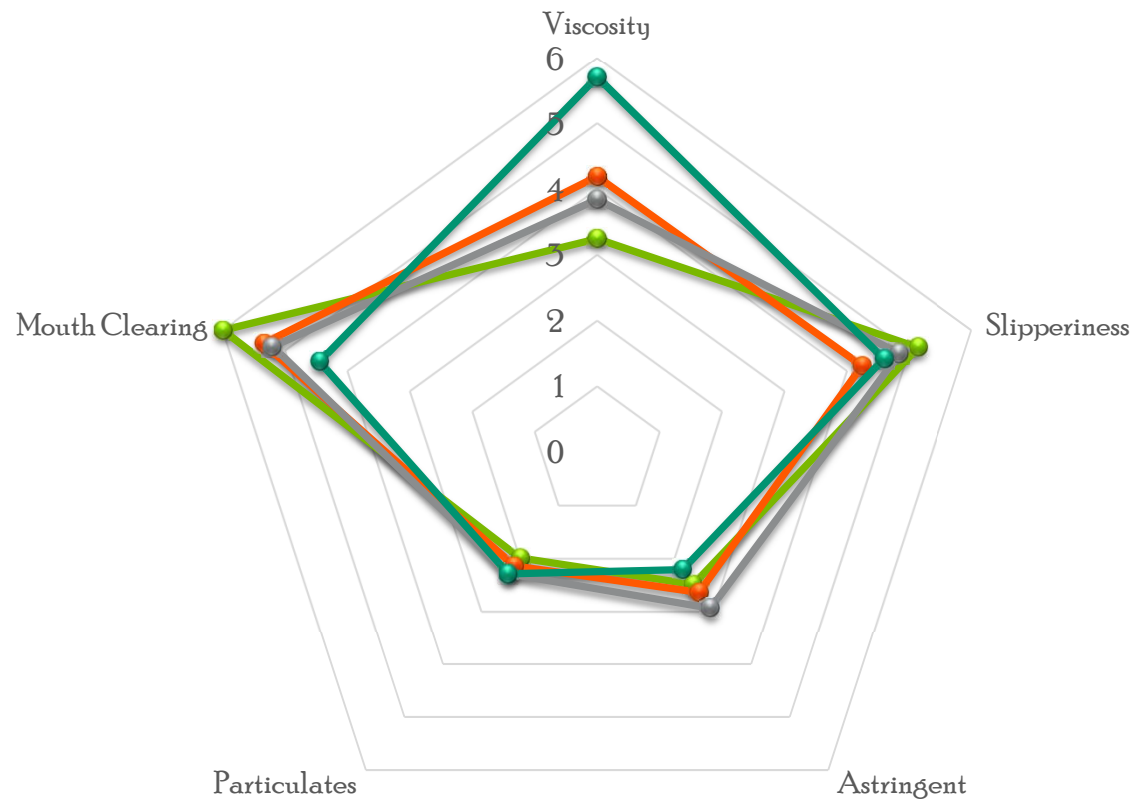


# Viscosity Curve of Oat Beverage



# Texture Ranking of Oat Beverage

Control   MCC/CMC/Carrageenan   MCC/Acacia/CMC   Gellan/LBG



**TIC GUMS**

# Ticaloid Pro 181 AG

Texture + Stability Solutions



# Almondmilk Formulations

## Ticaloid Pro 181 AG

Ingredients	Percentage
Water	97.70%
Sugar	3.00%
Almond Butter	2.00%
<b>Ticaloid Pro 181 AG</b>	<b>0.25%</b>
Salt	0.03%
Sodium Phosphate	0.02%

## Carrageenan/Lecithin

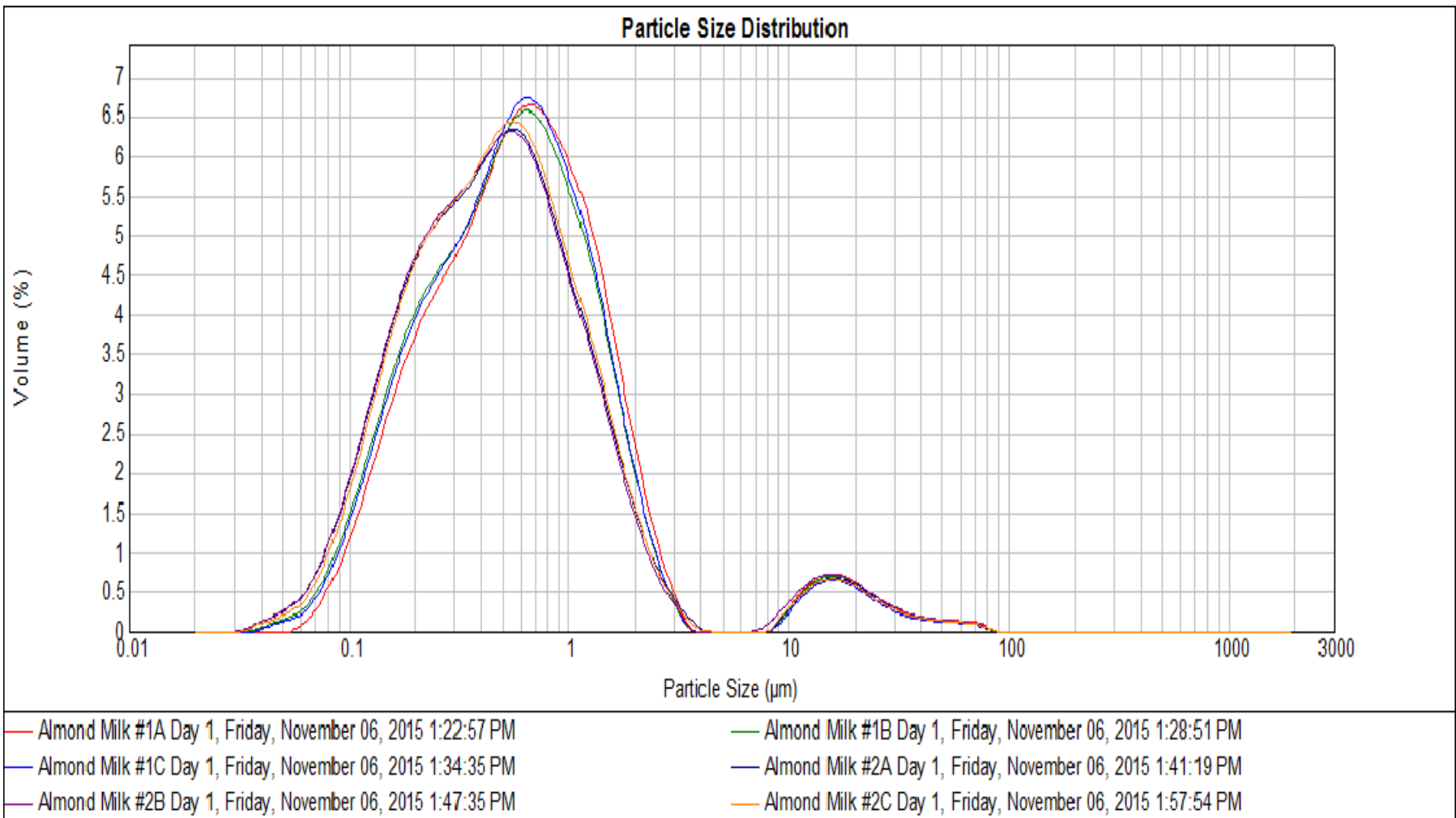
Ingredients	Percentage
Water	94.82%
Sugar	3.00%
Almond Butter	2.00%
<b>Soy Lecithin</b>	<b>0.10%</b>
Salt	0.03%
<b>Carrageenan</b>	<b>0.03%</b>
Sodium Phosphate	0.02%

Procedures:

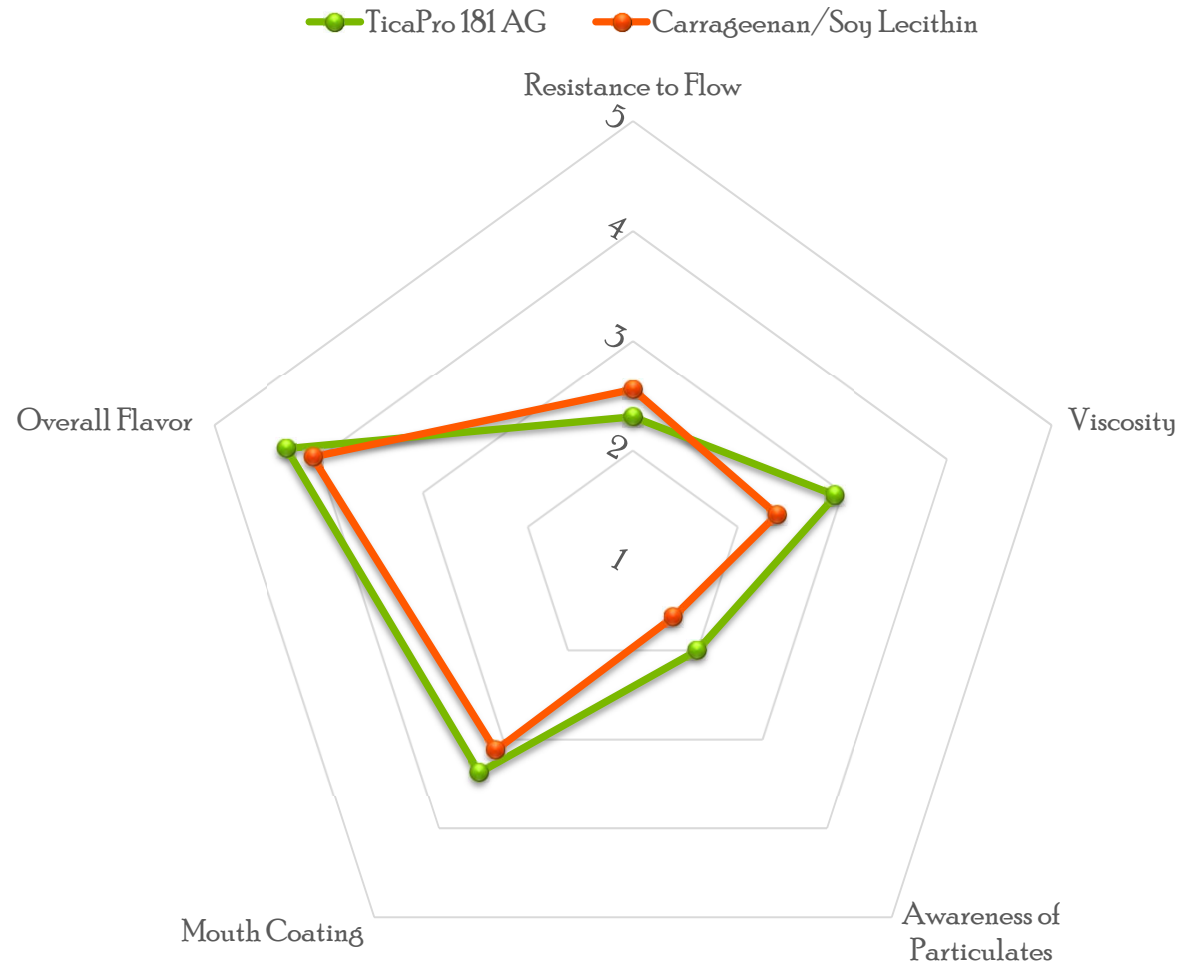
1. Mix stabilizer, sugar, sodium phosphate, and salt into the water
2. Mix for 10 minutes and then add almond butter with high shear
3. UHT process at 285°F for 4 seconds and homogenize 2500psi (2000/500)
4. Collect cold in sterile package



# Emulsion Stability of Almondmilk



# Texture Ranking of Almondmilk



# Conclusions

- Customized clean label alternatives to fit your product specific needs
  - Texture lexicon and mapping tool to match key texture attributes
- Leveraging the functionalities of multiple ingredients can provide control over texture
- Additional benefits
  - Processing consistency
  - Removes soy lecithin, carrageenan and other non-label friendly ingredients
  - Suitable for use in sugar free formulations