Ticaloid® PRO 181 AG
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Ticaloid®
PRO 181 AG

Label Declaration: Gum Acacia, Gellan Gum
Gum Acacia: Clean Label

- Exudate from Acacia Senegal or Seyal tree
- Harvested by tapping or natural exudation
- Organic grades available
- Label Friendly

Number of product launches in U.S. with gum acacia 2011 - 2015

Source: innova
Gellan Gum: Clean Label

- Fermentation Process
  - Bacterium: *Sphingomonas Elodea*
- Approved for use in organic products
- Label Friendly

![Number of product launches in U.S. with gellan gum 2011 - 2015](image-url)

Source: Innova
Ticaloid® PRO 181 AG Functionality

Gum Acacia
- Excellent natural emulsifier
- Low viscosity addition to product
- Increased mouth coating
- Wide usage range

Gellan Gum
- Excellent for suspension
- Fluid gel network
- Provides viscosity increase
- Extremely low usage level
Ticaloid® 181 AG Value

- Stabilizes Rice, Nut, Grain and Soy (RNGS) dairy-alternative beverages
- Suitable for clear/clean label products
- Does not contain sugar as standardizing agent
  - Functionally standardized by gum acacia
- Ability to remove soy lecithin
- Stabilizes foam in non-dairy beverages for barista style products
Ticaloid®
PRO 181 AG
Application Research
Toasted Coconut Almond Milk

Ingredients | Percentage
---|---
Water | 70.57
Coconut Milk | 24.00
Sugar | 3.00
Almond Butter | 2.00
Ticaloid® PRO 181 AG | 0.40
Salt | 0.03
Total | 100.00

Procedure:
1. Fill batch tank with water and Ticaloid® PRO 181 AG with agitation for 10 minutes
2. Add almond butter, sugar and salt to batch tank and maintain agitation
3. Add coconut milk to batch tank and maintain agitation for 10 minutes
4. Process UHT: Direct Steam Injection (DSI) at 140°C for 4 seconds
5. Homogenize downstream at 200 Bar (170/30) Total
6. Cool and collect aseptically

NUTRITIONAL FACTS

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount per serving</th>
<th>% Daily Value</th>
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<tbody>
<tr>
<td>Total Fat</td>
<td>17g</td>
<td>26%</td>
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<tr>
<td>Saturated Fat</td>
<td>10g</td>
<td>49%</td>
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<tr>
<td>Trans Fat</td>
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<td>0%</td>
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<tr>
<td>Cholesterol</td>
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<tr>
<td>Sodium</td>
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<tr>
<td>Total Carbohydrate</td>
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<tr>
<td>Fiber</td>
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<tr>
<td>Sugars</td>
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<td>Vitamin C</td>
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<tr>
<td>Calcium</td>
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</tr>
<tr>
<td>Iron</td>
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*Percentage Daily Values (DV) are based on a 2,000 calorie diet.*
This flow curve indicates shear thinning. As the coconut almond milk is sheared at higher rates, the viscosity decreases. The viscosity of this beverage ranges from approximately 80 to 15 centipoise, depending on the shear rate.
Coconut Almond Milk Particle Size

The particle size distributions are similar in shape over 217 days of ambient temperature storage. This is indicative of a stable emulsion that is free of creaming or sedimentation. This consistency is due to Gum Arabic’s superior emulsification.
The addition of coconut milk increases the mean scores of the viscosity, awareness of particulates, and mouth coating on a nine point scale.
Foam Stability

Traditional Stabilizer & Soy Lecithin

- Usage Levels:
  - 0.10% Soy Lecithin
  - Traditional Stabilizer

Ticaloid® PRO 181 AG

- Usage Level:
  - 0.25% Ticaloid® PRO 181 AG
Foam Stability

The destabilization kinetics of all the samples show the acacia containing sample out performed all products using lecithin. Acacia has a high HLB value and large molecular weight making it a good option for foam stability.
Increasing the usage level of Ticaloid® PRO 181 AG in the coconut almond milk increased the volume of foam when frothed.
Conclusions

- Customized clean label options to fit your product needs
- Ticaloid® PRO 181 AG
  - Suitable for sugar free formulations
  - Alternative to soy lecithin and traditional stabilizer systems
  - Functionally standardized gellan with gum acacia
Thank You!

Call the Gum Guru® at:
(800) 899-3953 or
(410) 273-7300

Chat with the Gum Guru® at: ticgums.com/chat