



CLEAN LABEL  
CONFERENCE

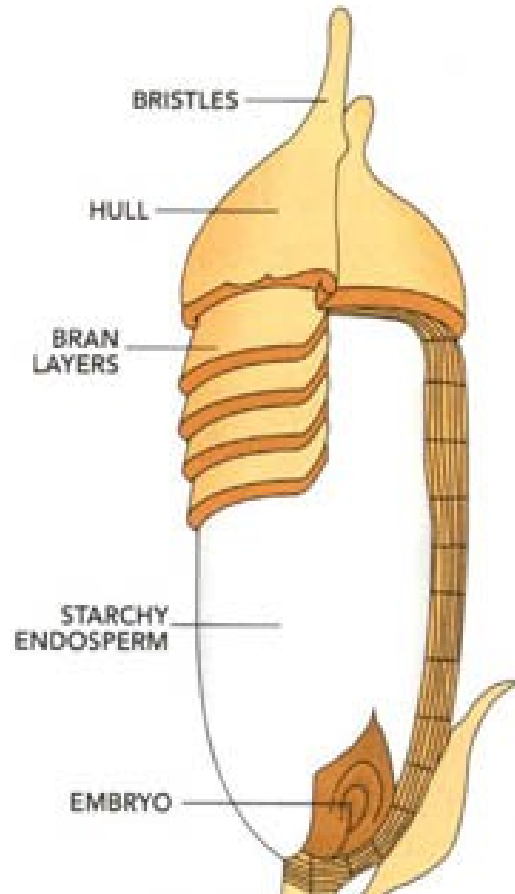
# Rice Hulls the Clean Label Alternative to $\text{SiO}_2$

Clean Label Conference 2015

Presented by: Steve Peirce  
RIBUS, Inc.



# Clean Label Source of Silica



20% Hulls

10% Bran

70% White

RICE: Chemistry and Technology, 3<sup>rd</sup> Edition

Grown and processed in the USA

# Rice Hulls Replace $\text{SiO}_2$

- 76% Carbohydrates
  - Cellulose
  - Crude Fiber
  - Hemicellulose
- ~20% **Silica** (plant based)

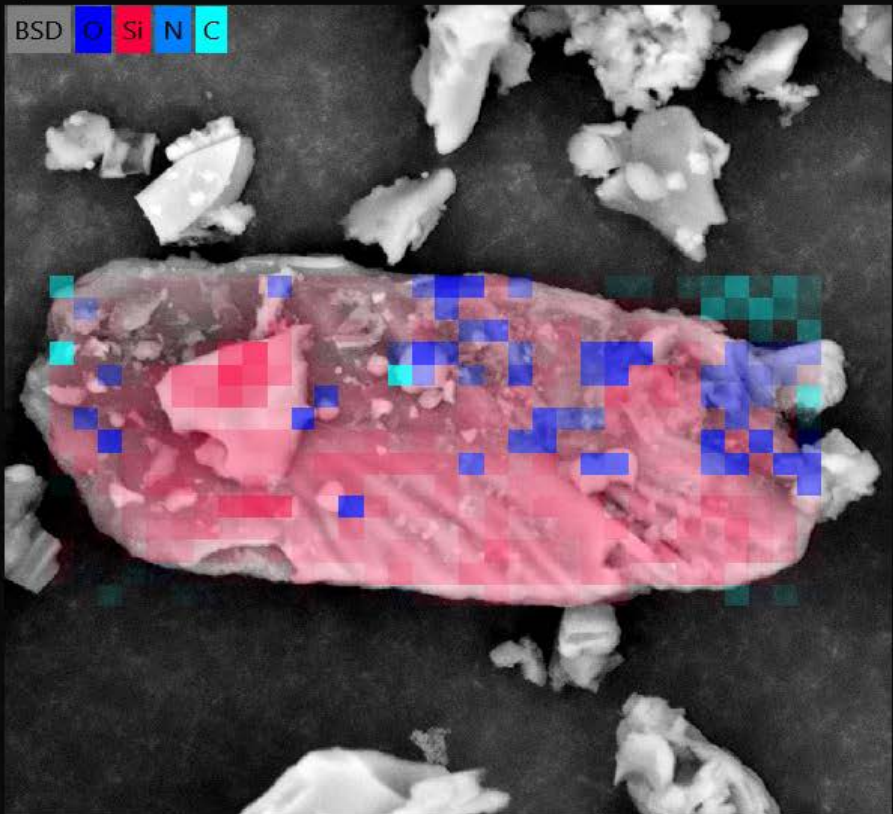
**1:1  $\text{SiO}_2$  Replacer**

# Natural Silica + Fiber

Element Identification

Map resolution: 32 x 15

BSD O Si N C



Weight percentage

Element	Weight percentage	Certainty
O	71.4 %	98.9 %
Si	16.6 %	99.1 %
N	6.5 %	96.7 %
C	5.5 %	98.1 %

Mapping

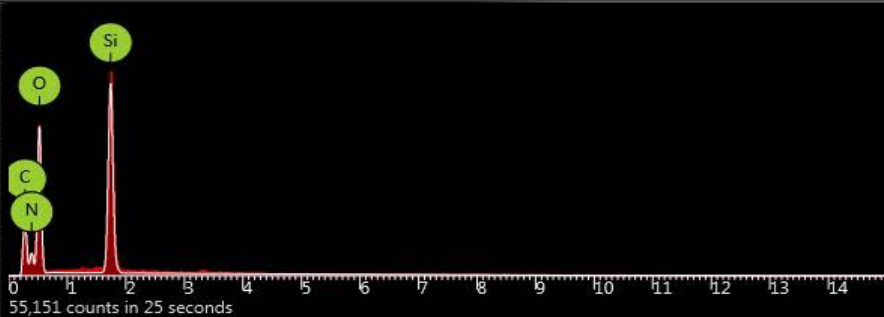
Map resolution: 32

Pixel time (ms): 50

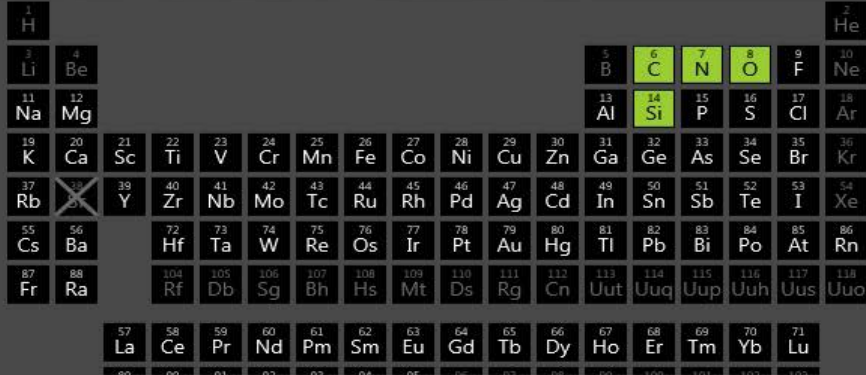
Number of passes: 1

Estimated map time: 00:01:42

Auto ID



55,151 counts in 25 seconds



Periodic table showing highlighted elements: O, Si, C, N.

# Clean Label Source of Silica

## Functions

- 1:1 Replacer  $\text{SiO}_2$
- Anti-Caking
- Liquid to Powder
- Flavor Carrier
- Plating Substrate

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## Applications

- Spices / Seasonings
- Dry Sauces / Gravy
- Beverage Powders
- Capsules / Tablets

# Distinguishing Properties

- Plant Based / Vegan
- USA Grown & Processed
- Sustainable
- Gluten Free / Non-GMO
- Kosher / Halal
- Export Friendly
- Maltodextrin Replacer (not water soluble)

# Regulatory

- GRAS (Self Determination)
- Natural or Certified Organic
- Processing Aid
- Patented
- Non-Nano Particle





# Label Declaration

Brand Name

Nu-FLOW<sup>®</sup>

<b>Nutrition Facts</b>	
Serving Size 1/2 cup (115g)	
Servings Per Container About 4	
<b>Amount Per Serving</b>	
<b>Calories 250</b>	<b>Calories from Fat 130</b>
<b>% Daily Value*</b>	
<b>Total Fat 14g</b>	<b>22%</b>
Saturated Fat 9g	<b>45%</b>
<b>Cholesterol 55mg</b>	<b>18%</b>
<b>Sodium 75mg</b>	<b>3%</b>
<b>Total Carbohydrate 26g</b>	<b>9%</b>
Dietary Fiber 0g	<b>0%</b>
Sugars 26g	
<b>Protein 4g</b>	
Vitamin A 10%	Vitamin C 0%
Calcium 10%	Iron 0%
<small>* Percent Daily Values are based on a 2,000 calorie diet.</small>	

- Rice Concentrate
- Rice Fiber
- Rice Hulls

# SiO<sub>2</sub> Outlawed in Organics

As of Nov. 3, 2014: SiO<sub>2</sub> is not allowed in Organics as long as Organic Rice Hulls are Commercially Available.

2015 Editor's Choice for Best Organic Ingredient  
at Engredea / ExpoWest

Source: Organic Food Production Act & Federal Register, Vol. 78, #102, Tues. May 28, 2013, pages 31817 & 31818.

# Rice Hulls: Clean Label Alternative to SiO<sub>2</sub>



**Thank You**

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