



iTi tropicals Inc.

Tropical Fruit Purees &
Concentrates

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**Presence of Undeclared Added Sugars and Other Ingredients in Coconut Water
(Testing conducted by a leading juice authenticity lab reveals that
while 85% of all coconut waters by volume are correctly labeled, numerous
brands, representing 15% of the total market volume, are not.) 1/**

iTi Tropicals, Inc. ("iTropicals") wishes to share the results of its market survey of added sugars and other ingredients in 20 coconut water beverages collected from retail stores in the United States. While the results show that the market leaders are labeling the added sugars, when present, the survey also identified 12 products that failed to identify the presence of added sugars and 2 products that failed to identify the presence of low levels of sulfites. iTropicals is calling on the coconut water industry to take proactive steps and properly label coconut water beverages sold in the United States.

As one of the world's leading suppliers of bulk coconut water, iTropicals became suspicious of the labeling of many of the coconut water beverages sold in the United States. Indeed, iTropicals' concerns have been reinforced by a statement made by an executive from one of the leading coconut water brands who acknowledged in a recent interview the widespread problem of added sugars and preservatives used in coconut water. 2/ The sugar content declared in the nutrition facts for many of the products far exceeds the level of sugars that iTropicals typically observes in freshly collected coconut water. It is in this context that iTropicals engaged a leading juice authenticity laboratory, Krueger Food Laboratories (KFL), to determine if commercially-available coconut waters are properly labeled.

Based on the test results, iTropicals found there are essentially two categories of coconut water products: (1) those with no added sugars and (2) those with added sugars. Specifically, the first category includes brands such as Coco Libre, Naked, Zico, and Zola, which supply 100% pure coconut waters without added sugars declared on the label or found in the products. The second category includes market leaders such as Goya and Vita Coco who combined represent 60% of all volume sold in the United States. These products generally contain more sugars than the 100% pure coconut water. For example, according to Vita Coco's product label, it contains "less than 1% natural fruit sugar." Effectively this means the Brix level of the raw materials can be increased from 4 to 5, or up to 25% increase in total soluble solid content. While we applaud that Vita Coco admits that it adds fruit sugars, we question whether "fruit sugars" is an appropriately descriptive name to describe the ingredient. Moreover, in the event the added sugars are indeed derived from fruits, we suspect they would be concentrated from the fruits and question whether it is appropriate to position a product with concentrated fruits as "never from concentrate."

1/ Market share information is based on data compiled by IRI.

2/ The interview is available at: <http://www.beveragedaily.com/Manufacturers/Vita-Coco-CEO-Strong-UK-rival-can-help-us-build-250m-coconut-water-category>.

Disturbingly, the second category also includes 12 brands of coconut water beverages that contain undeclared added sugars from corn, beet, cane, or rice. These products are believed to constitute roughly 15% of the coconut water sales by volume. These inexpensive added sugars sweeten the product and help mask the taste of the naturally occurring minerals in pure coconut water and in some cases are used to replace coconut water sugars. The practice offers unfair economic advantages to the perpetrators; it also hurts iTi (which markets only 100% pure coconut water in bulk, as an ingredient, with no added sugars) and it also harms companies that properly label their products. In addition, the analyses revealed low, detectable but undeclared levels of sulfites in 2 of these products.

As a leading coconut water ingredient supplier, iTi is concerned that the continued sale of coconut waters with undeclared added sugars and other ingredients threatens to jeopardize consumer confidence in the category. iTi, therefore, feels it is incumbent on the industry to take proactive steps to put an end to this misleading practice. By releasing the summary of the results of these analyses, iTi hopes that retailers and brand-holders will strive to ensure the ingredients added to coconut water are properly labeled.

The industry does have the ability to ensure the proper labeling of coconut water and iTi hopes proactive steps will be implemented in response to this information. iTi, for example, has controls in place from the plantations where the coconuts are grown, harvested, and processed to its operations in the United States where the concentrate is distributed for packaging. These practices ensure the purity and identity of its coconut water. iTi processors use carefully selected, high-quality coconuts that are only broken on-site at a facility registered with the Food and Drug Administration (FDA). The water is collected at the factory and processed under HACCP (Hazard Analysis and Critical Control Point) conditions. All the water collected this way is also GMO-free.

iTi engages in ethical sourcing practices and is committed to ensuring sustainability. By concentrating the coconut water at the plantation near the source, iTi is able to transport the concentrate from Southeast Asia with a far lower container freight carbon footprint being expended than for transporting the single-strength juice. iTi's coconut water from concentrate has the same superior quality and nutrition as those that are not from concentrate with the additional manufacturing, sustainability, and environmental benefits. Coconut water concentrate also exhibits the same high-quality taste and organoleptic characteristics as the coconut water that is not from concentrate.

If a customer wishes to offer unsweetened coconut water, we offer single-strength from Indonesia with a Brix level typically in the 3.4-4.0 range. One could blend this with the Thai Fragrant Nam Hom variety. The problem with this solution is cost and availability. The Nam Hom Variety is very costly (the price is more than double of the single-strength variety we offer from Indonesia) and availability is limited. One also has to compete with the fresh market in Thailand. iTi does offer both products. If a customer wants to enter in to the sweetened segment we recommend using the Indonesian variety and adding 1% or more sugar and simply declare it in the ingredient statement.

A more economical way to enter either the sweetened or unsweetened market is by using organic or conventional 60 °Brix concentrate. For an unsweetened version we recommend diluting the concentrate to a Brix level of 3.9-4.2. Since FDA has not yet issued a single-

strength standard for juice made from coconut water concentrate, FDA requires manufacturers to use the soluble solid contents of the “single-strength (unconcentrated) juice used to produce such concentrated juice.”^{3/} iTi collects information on the Brix level of the juice prior to concentration that can be used to reconstitute the juice to single strength. Harvest solids of coconut water are typically between 3.8 °Brix and 4.2 °Brix. For the sweetened segment we recommend reconstituting to the Brix level of the expressed juice and then adding sugar to the final desired Brix level. For the unsweetened version we recommend not using more than 4.3 °Brix because the mineral taste associated with high Brix levels might be too strong for consumers. This is also the reason why many brands decide to add sugar to mask the taste of the naturally-occurring minerals in pure coconut water. iTi offers 60 °Brix Thai Fragrant Nam Hom variety as well as organic and conventional coconut water concentrate from the Philippines and Indonesia. All products offered are 100% pure coconut water without sulfites, added sugar, or other additives.

The biggest opportunity for coconut water, however, is the use in 100% juice blends to lower the overall caloric content. Some of the cleanest, least-processed, packaged foods on the market are 100% juice products. As consumers look for alternatives to sugary soft drinks that are lower in calories and sugars, 100% juice blends made with coconut water offer an attractive option. Coconut water is the ideal ingredient to accomplish this goal. For example, in an 8 oz. serving of coconut water, there are 36 calories versus 140 calories for grape, 113 calories for orange and 150 calories for pomegranate. A 50/50 coconut water blend with any of these fruit juices could reduce the caloric content by 30-50% and the beverage could still be labeled as 100% juice. iTi recently designed a new website (www.coconutwaterconcentrate.com) for developers with FAQs, application ideas, news and a calculator for pricing and calories. This calculator can simply be used to compare the cost and calories for several ingredients, or as a more comprehensive cost and calorie calculation for new beverage development. Coconut water can also be used to reduce the thickness of highly viscous purees and yogurts, which is the complete opposite of banana puree that can be used to increase viscosity in fruit smoothies and other products. And, being relatively bland, coconut water does not interfere with other flavors and allows for the development of a 100% juice product with simple ingredients the consumer can pronounce, an ideal viscosity, and an improved nutritional profile with lower sugars and calories.

Additional information about the testing methodology can be found in Exhibit A while Exhibit B contains the results of the iTi findings.

^{3/} 21 CFR 101.30(h)(2). A citizen petition was submitted to FDA on July 2, 2014, by the Juice Products Association requesting FDA establish a minimum Brix level for single-strength coconut water at 3.9.

Exhibit A: Additional Information on the KFL testing

KFL considered a wide variety of factors in assessing whether the coconut water products contained added sugars. KFL used carbon stable isotope ratio analysis (Carbon SIRA scores), oligosaccharide analysis, and sugar profile analysis. The carbon stable isotope ratio method relies upon the differences in the ¹³C content of the sugars found in fruit versus those derived from cane or corn. The sugars found naturally in fruits have Carbon SIRA scores in the range of -24 to -26 while added sugars from cane have a score of -12 and corn syrup of -10. Carbon SIRA scores are well-recognized as an effective method in detecting added sugars in fruit juices. FDA recognizes that carbon stable isotope analysis can be used to detect cane or corn sweeteners in orange and apple juices. 1/ In addition, at least one federal court has relied on the testing results from KFL for its finding that the fruit juice contained added sugar. 2/ KFL used an analysis of oligosaccharides to detect minor byproducts of starch-derived hydrolysis syrups such as rice and corn syrup, whereas sugar profile analyses rely on the differences of fructose/glucose ratio between juices and added cane or corn sugars. KFL also tested the products for the presence of sulfites.

Relying on these three analyses, as well as other characteristics of 100% pure juice (e.g., mineral profile), KFL concludes that the market leaders either contained no added sugars or disclosed the presence of the added sugars. KFL identified undeclared added sugars from sources such as hydrolyzed rice starch, high fructose corn syrup, and sucrose in 12 of the products. KFL also found undeclared levels of sulfites in 2 products at levels in excess of 10 ppm, the level that triggers labeling under the relevant FDA requirements. 3/ Sulfites frequently can be found in coconut water given the manner in which much of the coconut water is harvested throughout South East Asia. Many farmers harvest the coconut on the farm and collect the coconut meat and the water. The raw and unpasteurized coconut water is then transported to a packaging facility that may be some distance away from the farm. In many instances, the farmers add sulfites to prevent the coconut water from spoiling during transport. Given this common practice, suppliers collecting coconut water in this manner should label the presence of sulfites in the coconut water.

1/ Relevant Section of FDA's Inspection Guide is available at: <http://www.fda.gov/ICECI/Inspections/InspectionGuides/ucm096410.htm>.

2/ *Pom Wonderful LLC. v. Purely Juice, Inc.*, No. 08-56375 (9th Cir. Dec. 28, 2009).

3/ 21 C.F.R. 101.100(a)(4).

Exhibit B: Summary of KFL Test Results

Category (1) Samples without Added Sugars				
Sample #	Packaged	Products	Labels/Claims	KFL Test Results
A3355	Packaged in U.S.	Zico Pure Premium Coconut Water, 14 oz Plastic (Indonesia)	<ul style="list-style-type: none"> • “100% coconut water” 	<ul style="list-style-type: none"> • Results are consistent with pure coconut water
A3356	Packaged in U.S.	Zola 100% Natural Coconut Water, 1L Tetra Prisma	<ul style="list-style-type: none"> • “100% natural coconut water” 	<ul style="list-style-type: none"> • Results are consistent with pure coconut water
A3357	Packaged in U.S.	Coco Libre Pure Organic Coconut Water, 11 oz Plastic	<ul style="list-style-type: none"> • “pure organic coconut water” • “100% organic” 	<ul style="list-style-type: none"> • Results are consistent with pure coconut water
A3376	Indonesia	Naked Pure Coconut Water, 11.2 ounce Tetra Prisma	<ul style="list-style-type: none"> • “No sugar added” • “100% juice” 	<ul style="list-style-type: none"> • Results are consistent with pure coconut water
Category (2) Group A Samples with Declared Added Sugars				
Sample #	Packaged	Products	Labels/Claims	KFL Test Results
A3371	Philippines	Vita Coco Pure Coconut Water 16.9 oz Tetra Prisma	<ul style="list-style-type: none"> • “pure coconut water” • “100% natural” • “100% juice” • Ingredient statement discloses “less than 1% natural fruit sugar” 	<ul style="list-style-type: none"> • Contains added sugar
A3372	Malaysia	Vita Coco Pure Water 16.9 oz Tetra Prisma	<ul style="list-style-type: none"> • “pure coconut water” • “100% natural” • “100% juice” • Ingredient statement discloses “less than 1% natural fruit sugar” 	<ul style="list-style-type: none"> • Contains added sugar

Category (2) Group A Samples with Declared Added Sugars				
Sample #	Packaged	Products	Labels/Claims	KFL Test Results
A3373	Sri Lanka	Vita Coco Pure Water 11.1 oz Tetra Prisma	<ul style="list-style-type: none"> • “pure coconut water” • “100% natural” • “100% juice” • Ingredient statement discloses “less than 1% natural fruit sugar” 	<ul style="list-style-type: none"> • Contains added sugar
A3377	Thailand	Goya Coconut Water with Pulp	<ul style="list-style-type: none"> • Ingredient statement discloses sugar and sulfite 	<ul style="list-style-type: none"> • Contains added sugar • Contains 17.2 ppm sulfite
Category (2) Group B Samples with Undeclared Added Sugars				
Sample #	Packaged	Products	Labels/Claims	KFL Test Results
A3360	Thailand	REDACTED	<ul style="list-style-type: none"> • “With 100% Natural Coconut Water” • “No Sugar Added” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added hydrolyzed starch syrup
A3361	Thailand	REDACTED	<ul style="list-style-type: none"> • “100% Coconut Water” • “No Added Sugar” • “No Sugar or Artificial Sweetener Added” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar
A3363	Thailand	REDACTED	<ul style="list-style-type: none"> • Ingredient statement does not disclose added sugar • Label does not disclose sulfite 	<ul style="list-style-type: none"> • Contains added sugar • Contains 14.1 ppm sulfite
A3364	Thailand	REDACTED	<ul style="list-style-type: none"> • Ingredient statement does not disclose added sugar • Label does not disclose sulfite 	<ul style="list-style-type: none"> • Contains added sugar • Contains 19.03 ppm sulfite

Category (2) Group B Samples with Undeclared Added Sugars				
Sample #	Packaged	Products	Labels/Claims	KFL Test Results
A3365	Thailand	REDACTED	<ul style="list-style-type: none"> • “100% Pure Young Coconut Water” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar
A3366	Thailand	REDACTED	<ul style="list-style-type: none"> • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar
A3367	Thailand	REDACTED	<ul style="list-style-type: none"> • “Unsweetened” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar
A3368	Thailand	REDACTED	<ul style="list-style-type: none"> • “No Added Sugar” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar
A3369	Thailand	REDACTED	<ul style="list-style-type: none"> • “100% Pure Coconut Water” • Ingredient statement does not disclose added sugar 	<ul style="list-style-type: none"> • Contains added sugar and hydrolyzed starch syrup
A3894	Thailand	REDACTED	<ul style="list-style-type: none"> • “100% Juice” • “100% Natural Coconut Water” 	<ul style="list-style-type: none"> • Results are atypical for pure coconut water. The product may contain a small quantity of added sucrose.
A3960	Thailand	REDACTED	<ul style="list-style-type: none"> • “No added sugar” • “100% juice” 	<ul style="list-style-type: none"> • The results are not consistent with pure coconut water. The product contains added sucrose
A4079	Thailand	REDACTED	<ul style="list-style-type: none"> • “100% natural coconut water” • “No preservatives or added sugar” 	<ul style="list-style-type: none"> • Contains added sucrose