



From: Janet Harriman- Quality and Safety Manager

Date: September 18, 2017

Re: Beet Sugar/Cane Sugar Comparison

Sugar sold by United Sugars is derived from domestically grown sugar beets and sugar cane. The following information is provided to explain that although there are different sources of sugar (empirically known as sucrose). Both beet sugar and cane sugar meet the World Codex Standards for white refined sugar.

United Sugars' sugar beets are grown primarily in the upper Midwest. Sugar beets are planted annually and the vegetative body of the beet which provides the sugar which is grown below ground. Sugar beets are harvested in the fall and the sugar is extracted through the diffusion process which involves heating up the beets and boiling the sugar juice out of the sugar beets. Sugar cane is grown in southern Florida. Sugar cane is a member of the grass family and the cane stalks grow above ground. The sugar cane is harvested throughout the fall into early spring. The sugar cane is the source of the sugar juice which is extracted through a process similar to sugar beets.

World Codex Standards define white sugar as having a purity level no less than 99.7% pure sucrose. United Sugars' white sugar routinely measures at 99.9% purity. The empirical formula for sucrose ($C_{12}H_{22}O_{11}$) is the same for either sugar derived from beets or cane. The remaining 0.01% constitutes the trace non-sugar ingredients resulting from the difference between cane as a grass and beet as a root.

Sugar beet derived sugar has an initial distinctive odor profile slightly stronger than cane sugar that quickly volatilizes when exposed to air, handling, water, etc. This odor does not transfer as either odor or taste into the final food products. Beet sugar is used throughout the US in virtually all food products that utilize sugar. Much of the same beet sugar is also packaged as retail sugar that consumers purchase for personal use in their homes for baking, cooking, and other consumable situations.

Please call or write if you have any questions or concerns. United Sugars Corporation is committed to continued service to our valued customers.

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