



**Hello,
I'm Sugar,
from Brazil**

VERTICAL SUPPORTS ®



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Brazil is the world's largest producer of sugarcane, sugar and fuel alcohol and one of the most cost efficient producers of sugar. It is also the leading exporter of sugar. Sugar accounts for about 2 percent of the country's gross national product, 17 percent of the country's agricultural product.

Sugar ICUMSA 45 is only produced in large quantities after confirmed sales, in the Brazilian domestic market only industries use this type of sugar, recently the sugar ICUMSA 45 was introduced in the domestic market with denomination " Top Quality".

In large quantities stored in warehouse only is Raw sugar, Crystal sugar ICUMSA 100 and 150.

Out of the 38 million tons of sugar produced in Brazil by 2009 only 4.5 million tons were ICUMSA 45.

The issue of logistics is also complex.

Currently the ports of Santos and Paranagua there many ships waiting for berthing and consequences for all warehouses are completely blended.

The cost of storing sugar ICUMSA 45 produced, bagged and stored in the port is very high, which makes it unfeasible.

Therefore sugar refining, storage and bagging for shipment only be achieved after the sale effectively.

The average delivery time of sugar at the port ready for shipment can several 30-45 days depending on the refining, transportation to the port of load and delay in berthing of vessels.

Past Performance and Proof of Products

We do not provide history of past transactions as this is against the law and contract rules established between seller and buyer, NCNDA of ICC - non-circumvention non-disclosure agreement of International Chamber of Commerce.

Many documents are used fraudulently, therefore can not report past performance nor provide any copy of SGS inspection, certificates of origin and others.

We had many problems with documents used illegally by companies / brokers who are acting in the international sugar market on our behalf without our permission.

We do not provide proof of product anytime before contract signature and bank to bank swift with proof of funds.

Please do not insist as we understand any communication that is not bank to bank has no value either for us or for the buyer.

It is very easy to issue a "fake" proof of product without bank to bank communication so we don't do it.

Sugar available in containers, Break bulk in bags and Bulk vessels:

Sugar in containers 20 ´

ICUMSA 45 - 100 - 150

Max. 26 m/tons

package: Polybags 50 kilos

520 polybags per unit

Raw sugar in containers 20'

Only in big bags 1 m/ton or 2 m/tons

Max. weight 20 m/tons with 20 big bags per unit

Prices C&F or CIF depending quantity and destination.

Sugar ICUMSA 45 - 100 and 150

In Break Bulk vessel

Package: polybags 50 kilos

Vessel Qty:

12.500 m/tons

25.000 m/tons

50.000 m/tons

Raw sugar - ICUMSA 800 - 1200

Bulk cargo

Only in bulk vessel

Vessel Qty.

12.500 m/tons

25.000 m/tons

50.000 m/tons

Procedures for Sugar Spot:

- *Buyer issues ICPO and BCL (ICPO endorsed by bank officer)*
- *Seller approves ICPO and sends the Draft Contract*
- *Buyer // Seller sign the Contract*
- *Buyer opens non-operative SBLC or MT 103 to seller bank*
- *Seller issues POP to turn operative the financial instrument*
- *Shipments starts as per contract terms.*

Procedures for Sugar Contracts:

- *Buyer issues LOI and BCL*
- *Seller issues FCO*
- *Buyer returns FCO signed / stamped*
- *Seller approves and sends the Draft Contract*
- *Buyer // Seller sign the Contract*
- *Buyer opens non-operative BG or SBLC to seller bank*
- *Seller issues Performance Bond Guarantee 2% and POP to turn operative the financial instrument*
- *Shipments starts as per contract terms.*

SGS INSPECTION:

SGS is the worlds leading inspection, verification, testing and certification company. SGS is recognised as the global benchmark for quality and integrity.

<http://www.br.sgs.com/>

Knowing the Product

Setting the standard which other types of sugar are measured against, ICUMSA 45 sugar is the world's leading consumer sugar. A highly refined sugar product, it is easily recognisable by its distinctive sparkling white colour and pure sucrose taste. ICUMSA 45 is perpetually in high demand as it is the safest form of sugar, due to the fact that the refining process by which it is created removes the bacteria and contaminants often present in raw sugars which can pose a threat to human health.

But what does 'ICUMSA 45' actually mean? ICUMSA is an acronym for the **International Commission For Uniform Methods Of Sugar Analysis**, an international regulatory body which sets the standard for sugar analysis tests thereby creating a system which can be used anywhere on the globe to accurately and quickly describe the properties of sugar. This is an essential system due to the fact that the sugar trade is a global one, and often buyers and sellers will be operating in completely different parts of the world, not to mention sometimes contending with a language barrier which can complicate negotiations. The ICUMSA ratings method allows a meaningful and accurate description of the product which can be easily understood by interested parties no matter where they come from.

Refining Sugar

Affination

The first step in removing the contaminants in raw sugar is mixing the raw sugar with a high sugar syrup to create

what is called 'magma'. This magma is then put into a centrifugal chamber where it is spun at high speed, driving off the liquid content and leaving light brown sugar crystals behind. This stage is often unnecessary if the refinery is working with VHP raw sugar.

Carbonation

To create a high quality ICUMSA 45 product however, more refining is necessary. In the next stage of the refining process, the sugar crystals are removed from the centrifugal chamber, washed, and dissolved into a liquid solution that is roughly half sugar and half liquid. To this solution milk of lime is added. As the milk of lime travels through the solution it forms small deposits of calcium carbonate (chalk). These deposits leech colour from the solution and also attract contaminants, locking them away within the chalk deposits. Because calcium carbonate is heavier than water, it sinks to the bottom and is subsequently removed. What is left is a high purity solution of sucrose and water.

Boiling

This solution is then boiled to remove excess water and to encourage sugar crystal growth to occur. When the sugar crystals have grown, they are once more sent into a centrifugal chamber which drives the excess liquid off and leaves the final product, sparkling sweet ICUMSA 45 sugar.

Of course this is a fairly simplified description of the sugar refining process. There are various methods and means of creating ICUMSA 45 sugar, but by and large they are all variations on the process outlined above. The Russian method, for instance, skips the affination stage entirely, but is much more rigorous in the carbonisation stage. Other refining methods involve the use of phosphorous instead of milk of lime, a process known as phosphation.

Regardless of the method used in its production, the qualities of ICUMSA 45 sugar are easily and accurately gaged by SGS testing according to ICUMSA guidelines.

About ICUMSA

ICUMSA (International Commission for Uniform Methods of Sugar Analysis) is a world-wide body which brings together the activities of the National Committees for Sugar Analysis in more than thirty member countries.

Work is carried out under various Subjects each headed by a Referee.

ICUMSA is the only international organisation concerned solely with analytical methods for the sugar industry. In addition to use by that industry, ICUMSA methods are recognised by authorities such as the Codex Alimentarius Commission, the OIML, the EU, and the US Food Chemicals Codex.

Methods are recommended for Tentative (T) approval by ICUMSA in the first instance. Upon meeting all the Commission's requirements, methods are accorded Official (O) status. Methods which are demonstrably useful and have found an established application, or which do not lend themselves to collaborative testing, are given an Accepted (A) status. Details of how the status of Methods has been established may be obtained by reading the relevant Proceedings.

ICUMSA 45

Sugar trading features heavily in futures trading, and many crops are sold years before they are actually grown, sometimes up to three years before the sugar cane is even planted. Brazil refines relatively little of its sugar for export, so newcomers to the market will often find that much Brazilian ICUMSA 45 has already been sold quite some time before it was produced. For this reason, buyers looking to purchase large amounts of sugar, especially of ICUMSA 45, but also lower grade sugar often run into difficulties sourcing a reliable supplier.

Sugar is tested according to a scale of whiteness. A simplistic way of looking at ICUMSA ratings is to say that the more white a sugar is, the more refined it is. ICUMSA 45 sugar is a sparkling white, highly refined sugar, suitable for human consumption and use in a wide range of food applications.

But how precisely is the whiteness of the sugar determined? In order for there to be an international standard, there needs to be a replicable scientific test to determine the ICUMSA rating of a sugar, and in order to achieve this level of precision and replicability, a colorimeter is used.

A colorimeter is a piece of equipment that determines which wavelengths of light are best absorbed by a substance. This is a useful piece of equipment, and a useful testing method because it is the ability of a substance to absorb various wavelengths of light that determines its colour. Therefore, if a sugar is very white and very refined, it will absorb little light, something which can be quantified by the colorimeter.

To understand how this works in real world terms, think of how we humans perceive colour. The human eye sees colours because certain objects absorb certain wavelengths of light, and reflect those which are not absorbed back to the eye. For example, a ball that appears blue to the human eye is simply made of a substance that absorbs all wavelengths of light apart from the blue ones, and reflects those back. The colour, or rather the shade of white works similarly except for the fact that things which we perceive as being very white are actually absorbing almost no light, and instead are reflecting all the light back at the eye.

Sugar tested according to ICUMSA standards is usually tested with light wavelengths of 420 nm and 560 nm, and the standard colorimeter used to analyse sugar according to ICUMSA standards is a tristimulus colorimeter, an instrument which measures several readings along what is known as the visible spectrum (simply the spectrum of light that is visible to the human eye). The output reading is then based on how much light was absorbed by the sugar sample. A low reading, such as 45, indicates highly quality refined sugar which absorbs little light and appears very white to the human eye, whereas a high reading going into the 1000 + range indicates an unrefined raw sugar which absorbs much more light, and therefore appears brown and dark.

Granulated Refined Sugar – Industrial Standard

As a natural sucrose sweetener, presented in the form of solid crystals, the Guarani® granulated refined sugar is obtained through the spontaneous crystallization of a refined solution of sugar in water. It has the form of the ordinary crystal sugar, but it stands out for its light color and clearness, and it is considered as a “Premium” type sugar. It is one of the most consumed sugars worldwide, having recently been introduced in the domestic market.

Applications:

A highly versatile product, capable of meeting the requirements of domestic, industrial and pharmaceutical applications. It stands out for its low color content, and it is widely used in the soda and transparent beverage industries, wherein the color (or absence of color) of the mixture is a significant factor for the product. Its purity and low susceptibility to microbiological contamination (practically sterile) makes this product one of the most indicated for drug manufacturing in pharmaceutical industries.

Trial	Method	Specifications
Appearance	Internal method	White solid uniform crystalline free from extraneous matter
Max. Arsenic (mg/kg)	External analysis	1
Max. Lead (mg/kg)	External analysis	1
Max. Conductimetric ash (% m/m)	Internal method	4
Max. copper (mg/kg)	External analysis	2
Max. total coliforms (NMP)	Internal method	(*) Absent (5)
Max. color (UI)	Internal method	Available in two colors: 20 45
Max. iron (mg/kg)	External analysis	10
Max. mercury (mg/kg)	External analysis	5
Black spots (N°/ 100g)	Internal method	5
Insoluble residue (Maximum Level)	Internal method	5
Taste and Smell	Internal method	Characteristic and free from unpleasant taste and smell
Sucrose % (polarization °Z) min	Internal method	9,980
Max. moisture (% m/m)	Internal method	4

Sugar VHP (Very High Polarisation)

SPECIFICATIONS: VHP BROWN SUGAR /
ICUMSA 1000

Polarisation: 97.8 degree to 99.2 degree

Ash Content: 0.15 % max

Colour ICUMSA 600 to 1200 typical

Solubility: 95%

Free flowing

Colour: Brown

Radiation: Within internationally acceptable limits

Granulation: 0.6 mm of regular square (medium size)

Moisture: 0.15% max

Magnetic Particles: 10 MG/K

So₂: 120 MG/K

Sulphur Dioxide: 60 MG/K MIN

Smell: Free from unusual or abnormal smells

Reducing Sugar: 0.05% MAX by weight

HPN Staph Aureus: NIL

MAX AS: 1 P.P.M

MAX PS: 2 P.P.M

MAX CU: 3 P.P.M

Substance Structure : Solid Brown Growing VHP Sugar

The bulk of the world's VHP sugar is produced in Brazil from high sucrose sugar cane. In Brazil, most sugar cane is grown in the centre south region adjacent to and in the Sao Paulo state. This region is well known for its large expanses of flat fields, fertile soils, and clement climate which are all ideal for growing sugar cane, which thrives in tropical or subtropical climates. Brazil is well known for spending much time and energy in the pursuit of better strains of sugar cane that grow faster and have higher sucrose contents than traditional forms of sugar cane which are still grown in many countries. This investment of time and money has paid off with high yield crops which are eminently suitable for the production of VHP sugar.

Sugar cane is generally planted in the summer months, left to grow between twelve and sixteen months, and then harvested in the cooler months. Typically the harvesting season in the Sao Paulo region of Brazil runs from May through to November.

VHP Sugar Production

There are several steps involved in the production of VHP sugar. First, the harvested cane must be shredded and cut in preparation for milling. The cane is then sent through rollers and subsequently through crushing devices that squeeze the juice out of the cane, separating it into two products, sugar juice, which will be refined into VHP sugar, and dry fibrous material known as bagasse, which will be recycled or used as fuel.

The sugar juice is then piped to a different part of the mill, where it is boiled in vacuum pans to remove excess water and concentrate the sugar content. Sugar dust crystals are then added to the juice to encourage the growth of sucrose crystals, which form around the dust crystals. When they are fully grown, both the liquid and the crystals are fed into a centrifugal chamber which spins the mixture at very high speeds, driving the liquid content away from the sugar crystals. What is left is high grade 'A' sugar and 'A' molasses (also referred to as first molasses). The high grade 'A' sugar is known as VHP.

The first molasses is then boiled again and subjected to a further crystal growth process. When crystals are grown, they are once more sent into the centrifugal chamber and spun to separate crystal from molasses. The results from this reprocessing are known as 'B' sugar, and second, or dark molasses. The second molasses does not contain nearly as much sucrose as the first molasses, and 'B' sugar is also of lower quality.

The process is then repeated again, this time with the products being final molasses, also known as 'C' molasses,

or blackstrap molasses, and 'C' sugar. In some cases, the B and C sugars will then be remelted into a liquid solution and recrystallised to make high grade VHP sugar.

Production of VHP sugar requires quite a great deal of sugar cane, and it is estimated that for every hundred tons of sugar cane that is processed, only twelve tons of VHP sugar is produced.

VHP Sugar ICUMSA Ratings

Most VHP sugar falls somewhere between ICUMSA 600 and ICUMSA 1200 on the ICUMSA ratings scale. ICUMSA is an acronym, that stands for 'International Commission For Uniform Methods Of Sugar Analysis', which is the international body that regulates the way that sugar is analysed.

The ICUMSA ratings system is based on a colorimetric evaluation of sugar, and is carried out with an instrument called a colorimeter. This device is able to give a precise numerical reading which represents the coloration of the sugar sample which has been fed into it.

This is an effective means of testing the purity and quality of sugar because as sugar becomes more refined and pure, it loses the dark brown coloration associated with raw sugar which is relatively highly contaminated with biological agents and colorants, and becomes lighter and lighter. Highly refined sugar is a sparkling white colour, whereas non VHP raw sugar can be ICUMSA 3000 or more. Because VHP sugar is so very high in sucrose and contains relatively few contaminants, it is a light brown colour.

All sugar is tested according to how white it is, even brown sugar. Sugar is tested according to whiteness because the whiter sugar is, the more refining it has undergone, the less contaminants and chemicals are left in it, and subsequently the higher the quality it is. ICUMSA ratings are generally 'reversed ratings', meaning that the

smaller the number is, the higher the quality of the sugar. This type of ICUMSA rating is known as the Brazilian SGS system, and it is the system under which we and most parts of the world trade sugar. In Europe this system is reversed, and ICUMSA 42 sugar actually refers to raw unrefined sugar. In order to simplify the sugar purchasing process, it is often simpler to ask for the Brazilian SGS rating of sugar.

But how does one know whether or not sugar is ICUMSA 150 or not? How can this be verified? The ICUMSA ratings test is carried out with a piece of equipment called a colorimeter, which is a device that gives a reading based on the wavelengths of light a substance absorbs.

ICUMSA 150 Sugar

ICUMSA 150 sugar is refined white sugar. Not quite as refined as ICUMSA 45 sugar, ICUMSA 150 sugar is still food grade and is often used by manufacturers making foodstuffs where the refining requirements for sugar are lower than those required for sugar sold direct to consumers. ICUMSA 150 sugar is in fact relatively highly refined sugar, especially when one considers that higher ICUMSA rated sugars are available, up to ICUMSA 4600 or more, but due to high levels of contamination and bacteria, these are not suitable for human consumption. ICUMSA (International Commission For Uniform Methods Of Sugar Analysis) Ratings are ratings standardised by the aforementioned international body which reflect how refined sugar is, and thereby allow sugar to be traded across international borders with surety.

Applications:

It is a highly versatile product and may be employed in several applications, from domestic to industrial processes. Some of the several uses are: preparation of foods in general, soda, juice and sweetened beverage industries, brewery, baking, fondants, food industries, etc.

Specifications

Trial	Method	Specifications
Appearance	Internal method	White solid crystalline free from impurities
Max. arsenic (mg/kg)	External analysis	1
Max. lead (mg/kg)	External analysis	1
Max. conductimetric ash (% m/m)	Internal method	5
Max. copper (mg/kg)	External analysis	2
Max. total coliforms (NMP)	Internal method	(*) Absent (100)
Max. ICUMSA color	Internal method	150
Max. mercury (mg/kg)	External analysis	5

Sucrose % (polarization °Z) min	Internal method	99,7
Taste and Smell	Internal method	Characteristic and free from unpleasant taste and smell
Salmonella/25g	Internal method	Absent
Max. sulfite (SO ₂) (mg/kg)	Internal method	15
Max. moisture (% m/m)	Internal method	6

VERTICAL SUPPORTS[®]

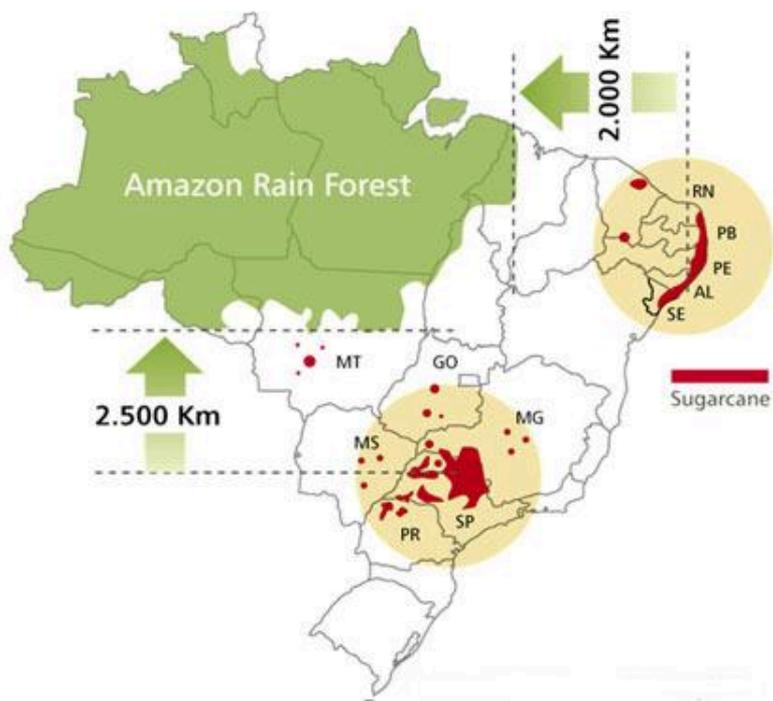
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Sugarcane producing regions in Brazil







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