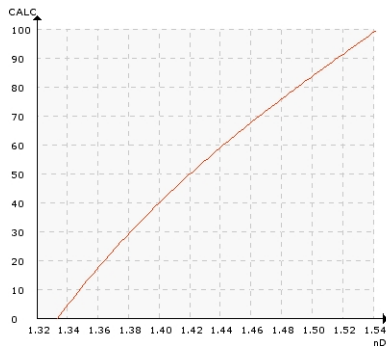


CANE SUGAR

Typical end products

Syrup, soft drinks, beer brewing, preserves, beverage, sweets, liqueurs, ethanol, etc.

Chemical curve: R.I. per BRIX at Ref. Temp. of 20°C



Introduction

Cane sugar crystallization produces a residual, which still contains a lot of soluble sucrose. The objective for the manufacturer is to improve its recovery.

Crystallization is carried out in vacuum boiling pans under carefully regulated conditions. The white sugar crystals are separated in centrifuges. The sugar from the centrifuges is dried in drum dryers and the syrup is collected for the next boiling.

The first non-acceptable sugar is circulated back to the affinated sugar to be dissolved and the final syrup from the white sugar boiling is directed to the recovery process.

Application


The recovery sugars are separated in centrifuges. Syrup from the last recovery boiling forms a by-product called refinery molasses. The molasses can be used for cattle feed, fermentation or can be extracted by an ion-exchanger.

Installation

The K-Patents Process Refractometers may be installed to perform a variety of monitoring and control applications for this process:

1. Determining the seeding point and to monitor the drop of mother liquor concentration after seeding in the recovery pan.
2. Monitoring the final molasses to ensure that the concentration complies with the buyers' specification. Typical measurement range is 60-90 Brix.
3. Dilution control to maintain the concentration at a constant level and the control of separation for the molasses.
4. Monitoring the waste water line of a sugar cane refinery to detect inadvertent leakage of sugar into the waste water stream. Typical measurement range is 0-5 Brix.

SUGAR AND SWEETENERS	
APPLICATION NOTE	1.02.05
CANE SUGAR RECOVERY	

Instrumentation	Description
	K-Patents Process Refractometer PR-23-GP is an industrial refractometer for large pipe sizes and tanks, cookers, crystallizers and kettles. Installation through a flange or clamp connection.
Measurement range:	Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.