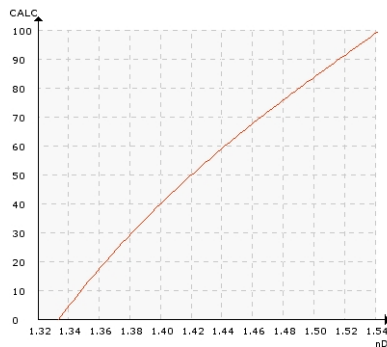


STANDARDIZED SUGAR SYRUP

Typical end products

Soft drinks, confectionary, canned products etc.

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



Introduction

In the beverage, confectionary and canned product industries, sugar is mostly processed as a watery solution. Therefore, the first stage of the process is the production of standardized sugar syrup. The concentration is between 60 - 67°Brix. Discontinuous and continuous processes with hot or cold dissolving systems are in use.

Application

The crystal sugar is typically dissolved in water, using one of a variety of mixing techniques. The

most efficient way is continuous dissolving using a "jet mixer", which ensures extremely rapid dissolving.

In order to obtain a uniform product quality, the sugar solution Brix level has to be controlled carefully. For example, too much or too little sugar affects the composition of toffee, and too much sugar in soft drinks means uneven quality and excessive use of the other ingredients.


Installation

The K-Patents Sanitary Refractometer, PR-23-AC is installed in the mixer outlet to measure the concentration of dissolved sugar.

The mixed sugar solution contains a large quantity of air bubbles. These bubbles have an influence on the traditional density measuring devices. The K-Patents Refractometer only measures the liquid concentration. This is a consequence of the Refractive Index measurement principle, which is unaffected by air bubbles.

The precise and rapid in-line measurements, which are obtainable by using a K-Patents refractometer, help to optimize processing time and to save raw materials.

FOOD AND BEVERAGE	
APPLICATION NOTE	2.08.00
SUGAR DISSOLVING	

Instrumentation	Description
	<p>K-Patents Sanitary Compact Refractometer PR-23-AC for small pipe line sizes of 2.5 inch and smaller.</p> <p>The PR-23-AC sensor is installed in the pipe bend. It is angle mounted on the outer corner of the pipe bend directly, or by a flow cell using a 3A Sanitary clamp or Varivent® connection.</p>
Measurement range:	Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.