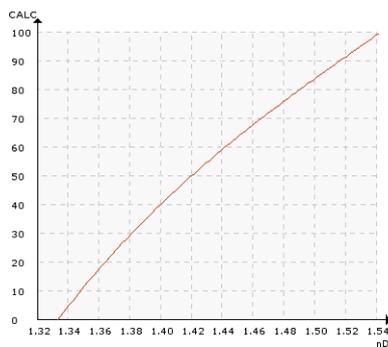


CA-ARABONATE

Typical end products

Vitamin B-2 (Riboflavin)

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



Introduction

Ca-Araborate is used to manufacture Vitamin B-2, Riboflavin. Corn is converted into glucose, which is then oxidized and purified by an ion-exchanger into Ca-Araborate. Ca-Araborate is precipitated and separated by centrifugation, then dissolved in water before further processing it into Vitamin B-2.

Application

The solid Ca-Araborate is taken from the centrifuge and fed into a tank where it is dissolved in water to about 50% at a process temperature of 90°C

(194°F). It is very important that the concentration of Ca-Araborate is kept constant before it enters the following production steps.

The K-Patents Sanitary Refractometer PR-23-AC or PR-23-AP provides real-time control in a procedure, which otherwise has to be performed by weighing out a calculated amount of water with the timed addition of solid Ca-Araborate from the centrifuge. The K-Patents refractometer ensures precise control of Ca-Araborate to water concentrations.

Installation

The K-Patents refractometer is used by the operator to ensure that each tank has the correct Ca-Araborate concentration before the solution enters the next phase of production. The raw and in-process materials are controlled to achieve defect free production.

The typical measurement range is 10-50%b.w. and the normal process temperature is around 90°C (194°F). Automatic prism cleaning with an integral steam nozzle is recommended.

As an added benefit, the K-Patents refractometer records process data for every batch or lot via Ethernet. It is ideal for the PAT (Process Analytical Technology) framework and for the GMP (Good Manufacturing Practice) in the production of API's (Active Pharmaceutical Ingredients).

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>
	<p>K-Patents Sanitary Probe Refractometer PR-23-AP for installations in large pipes, tanks, cookers, crystallizers and kettles, and for higher temperatures up to 150°C (300 °F). Installation through a 3A Sanitary clamp.</p>
<p>Measurement range:</p>	<p>Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.</p>