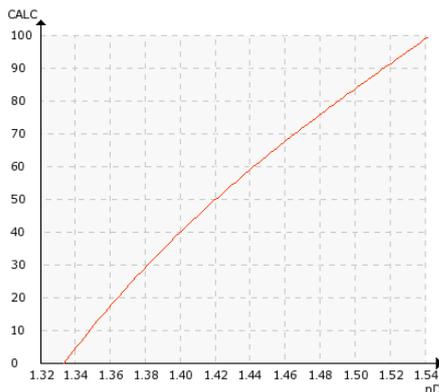


PUDDING SLURRY

Typical end products

Rice pudding, other dairy desserts, jellies, etc.

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



Introduction

Dairy desserts, e.g. rice pudding, production has high requirements to product quality and taste. In order to ensure the end product homogeneity and consistency, it is of utmost importance to continuously control the quality of the pudding slurry.

Application

Rice pudding is prepared from rice mixed with hot water or milk and sugar, and possibly other ingredients depending on the recipe, e.g. cinnamon and raisins.

Rice pudding product in hot water or milk is prepared by blending precooked rice with a sugar syrup to form a first coating on the rice grains, and blending the sugar-coated rice with an aqueous starch slurry to form a second coating on the rice grains, the amount of water used to prepare the coating being

limited such that no subsequent drying step is necessary.

The sugar syrup used to form the first coating on the rice is prepared by dry blending sugar, salt, flavoring and coloring, adding a limited quantity of water and heating for a sufficient period of time and at a temperature high enough to dissolve all of the water-soluble dry ingredients. The amount of water present is limited to the minimum amount required to effect solution at elevated temperatures so that when the sugar syrup is cooled it will solidify to a dry mass.

The starch slurry is prepared by mixing starch and a limited quantity of water sufficiently to form a uniform dispersion.

Sugar syrup is then blended sufficiently with a predetermined quantity of precooked rice to evenly coat the rice with the syrup. The resulting mixture is blended with the starch slurry and mixed until the rice is dry and no longer clumps.

The mixed mass is then pumped with a rotary lobe pump to the continuous cooker where integrity of the grains is achieved. To ensure desirable product texture, the high solids content in the dairy desserts production is recommended to be 25-40%. The K-Patents Sanitary Refractometer PR-23-AC is installed after the cooking stage to measure the total dissolved solids of the liquid phase before the pudding slurry is forwarded to the product finalizing stage. If the pudding slurry is in compliance with the recipe's texture, it is led to the pasteurization stage. At this stage product bacteriological safety is ensured. Pasteurization is also the reason for the dairy products' extended shelf life. Then the pudding slurry is cooled and filled into single use packages.

FOOD AND BEVERAGE	
APPLICATION NOTE	2.16.00
RICE PUDDING	

Installation

The K-Patents Sanitary Refractometer PR-23-AC is installed in the pipe bent after the cooking stage. The K-Patents PR-23-AC is 3-A approved and EHEDG tested to meet the highest hygiene requirements for aseptic dairy production. The K-Patents refractometer monitoring of product Brix allows for instantaneous and real-time pudding quality control before the end-product proceeds to filling. The K-Patents refractometer measurement is not influenced by the solid components such as rice grains in the slurry.

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.
Output units:	Concentration % by weight, °Brix, °Plato, °Balling, °Baume, Density.