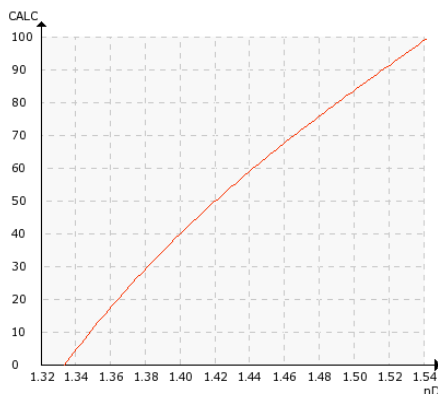


YEAST EXTRACT SOLUTION

Typical end products

Food ingredients, flavourings and seasoning, nutrients for bacterial culture media

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



Introduction

Yeast extract is a taste-giving ingredient that is used in a variety of dishes, in particular, in soups, sauces and ready meals to round-off the taste. Yeast extract is also used as nutrient for bacterial culture media.

Application

Yeast extract is prepared from baker's or brewer's yeast by extracting the cell contents. Yeast extract production is normally carried out through the process of autolysis.

First, the yeast must be separated from the culture medium. In order to open the cells, yeast must go through moderate heat treatment. This allows the conservation of enzymes.

The next step is the autolysis. Autolysis is the process by which a cell will consume itself using enzymes contained within the same cell. This step of the process is performed under mild conditions of pH and temperature. Its duration depends on the type of yeast and to what extent the proteins have to be broken down. Autolysis involves a freeing of enzymes within the yeasts in order to break down the proteins. Further, separation of the insoluble part such as yeast cell walls from the water soluble components of yeast will constitute the yeast extract.

Before proceeding to packaging or spray drying the yeast extract must be concentrated and pasteurized. This is the step where in-line Quality Control becomes important for liquid forms packaging for which the concentration must be 50-65% dry matters, and for paste forms packaging 70-80% dry matters. With spray drying the yeast extract can be dried to fine powder or granulated particles and then packaged in bags or boxes.


Installation

The K-Patents Sanitary Refractometer PR-23-AC is installed in the pipe bend for and after the concentrator and pasteurizer.

The K-Patents PR-23-AC is 3-A approved and EHEDG tested to meet the highest hygiene requirements.

The process temperature is 60 °C (140 °F), the measurement range is 0-100 Brix.

FOOD AND BEVERAGE	
APPLICATION NOTE	2.17.00
YEAST EXTRACT	

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>Measurement range:</p>	<p>Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.</p>
<p>Output units:</p>	<p>Concentration % by weight, °Brix, °Plato, °Balling, °Baume, Density.</p>