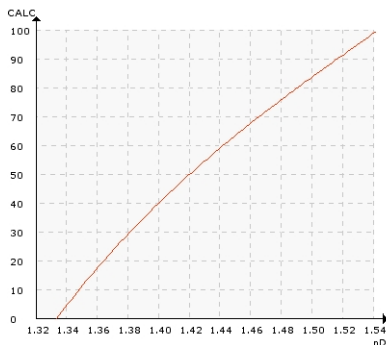


MONOSODIUM GLUTAMATE, MSG ($C_8H_8NNaO_4 \cdot H_2O$)

Typical end products

MSG for barbecue sauce, salad dressings, snack food, tortilla chips, seasoning mixtures etc.

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



Introduction

Monosodium glutamate, more commonly referred to as MSG, is a sodium salt ($C_5H_8NNaO_4$) of the non-essential amino acid glutamic acid. It is used to intensify the natural flavor of meats and vegetables.

Application

Several U.S. companies have developed their own microbiological process, others have obtained it from

the Japanese. The principal process steps are fermentation, concentration, hydrolysis, neutralization and acidification, crystallization, separation and purification.


One of the most important areas of concern for end product quality control is crystallization.

The principle measurement is total density, which is measured at the crystallizer outlet. This is used to regulate the flow of fresh liquor into the crystallizer circulation, thereby keeping the supersaturation levels within specifications. This continuous monitoring maintains process consistency.

Installation

The K-Patents Sanitary Probe Refractometer PR-23-AP is installed directly between the outlet and the heat-exchanger in the crystallizer vessel recirculation-pipe.

The typical measurement range of MSG is 45-65 Brix and the process temperature is about 60°C (140°F).

Instrumentation	Description
 A digital refractometer with a white plastic housing and a stainless steel probe. The probe has a red, knurled handle. The device's screen displays the number '25.31'.	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.
Measurement range:	Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.