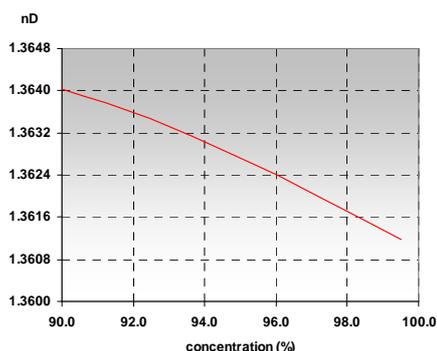
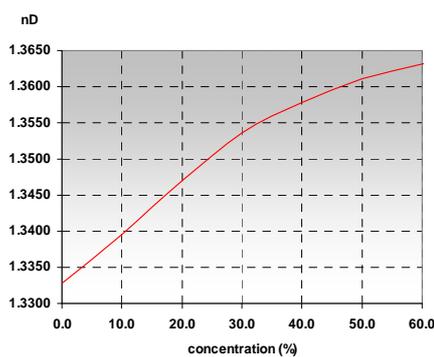


ETHANOL C₂H₅OH, ETHYL ALCOHOL

Typical end products

Antiseptics, antidotes, solvent, synthesis of chemicals, spirits, fuel (see also Application Note 9.01.03 Bioethanol Stillage Processing)

Chemical curve: Ethanol R.I. per Conc% b.w. at Ref. Temp. of 20°C



Introduction

Ethanol (Ethyl Alcohol) is a colorless liquid, which is miscible with water when heat is applied to it. Alcohol has traditionally been manufactured by the fermentation of materials containing starch and sugars.

At present, most of the alcohol is made with the catalytic hydration of ethene. Ethanol, an alcohol suitable for human consumption, is widely used as a solvent and for the synthesis of other chemical products. It is also used as a fuel.

Application

In the pharmaceutical industry, an alcohol and water mixture is used in HPLC (High Performance Liquid Chromatography).

The required concentrations are obtained by mixing a full strength solution with water. The alcohol and water mixture is kept at a constant temperature of around 15°C (59°F) by a plate cooler.

CHEMICALS AND ALLIED	
APPLICATION NOTE	4.01.02
ETHANOL BLENDING	

Installation

The K-Patents Process Refractometer PR-23-A is used to control and measure the concentration of alcohol in water.

Appropriate equipment with hazardous and intrinsic safety approvals are available when required.

Typical measurement range is 0-50% and the normal process temperature is about 15°C (59°F).

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 Process Refractometer PR-23-GP is an industrial refractometer for large pipe sizes and tanks, cookers, crystallizers and kettles. Installation through a flange or clamp connection.</p>
Area classification:	Intrinsic safety and hazardous area approvals available.
Measurement range:	Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 % by weight.