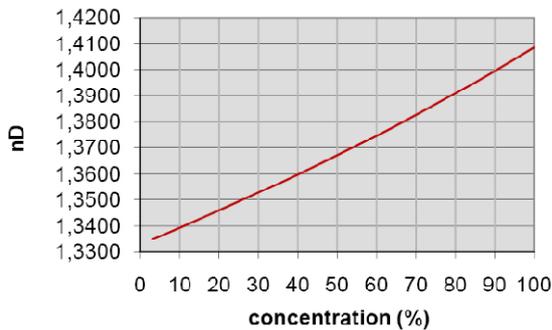


HYDROGEN PEROXIDE, H₂O₂

Typical end products

Chemical synthesis, metals, alloys, printed circuit board cleaning, etching, brightening, textile bleaching, paper pulp bleaching, aseptic packaging, water filtration, ink removal from waste paper

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



Introduction

Hydrogen peroxide is a clear, colorless and slightly viscous liquid.

Application

Hydrogen peroxide is manufactured almost exclusively by the autoxidation (AO) process. The process is based on a reduction of anthraquinone,

followed by oxidation resulting in the formation of H₂O₂.

Hydrogen peroxide is separated from water with extraction and is concentrated to produce grades at standard commercial strengths of 35 - 65%.

Installation

There are a range of refractometer installation points in a H₂O₂ plant. Concentration measurement can be taken after peroxide extraction. At this point the concentration is 30-40%.

After extraction, H₂O₂ is purified and concentrated by distilling it to the specified concentration. The K-Patents Process Refractometer PR-23-GP is ideally suited for distillation control.

Hydrogen Peroxide often contains large quantities of hydrogen gas bubbles, which can cause disturbances and serious problems for density meters. The K-Patents refractometer has major advantages in the H₂O₂ application. It is not subject to measurement errors caused by bubbles, color or particles, and it can be mounted directly in the main line so sampling lines are unnecessary.

CHEMICALS AND ALLIED	
APPLICATION NOTE	4.01.04
AUTOXIDATION PROCESS: HYDROGEN PEROXIDE	

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>
<p>Measurement range:</p>	<p>Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 % by weight.</p>