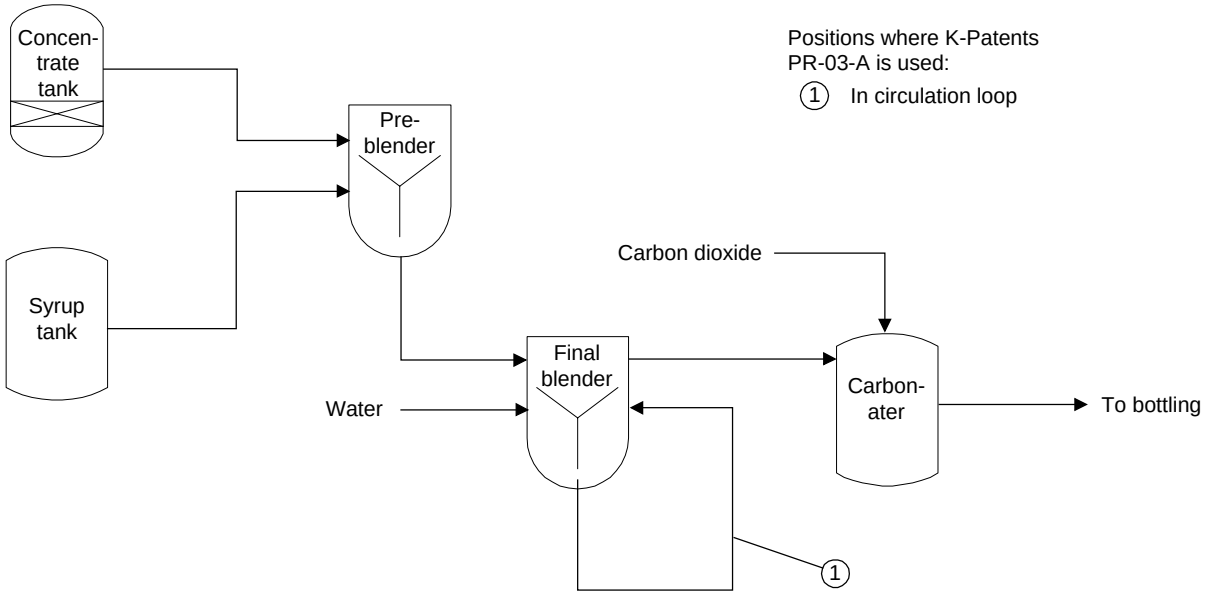
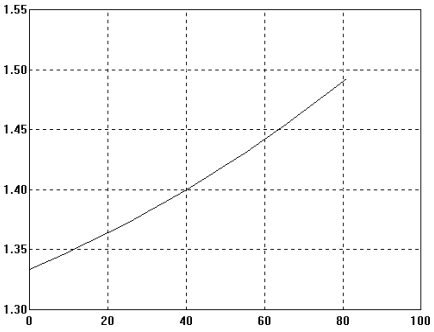
Blending of Soft Drinks



Soft Drink

Chemical curve: R.I. per Brix



R.I. Reference Temp. 20°C

See also

Online Blending of Fruit Juices 2.04.02
Interface Detection 2.12.00

Introduction

Soft drinks are produced and consumed in huge amounts all over the world. According to the biggest soft drink manufacturers the consumption has been growing and the growth will continue.

The main ingredients in soft drinks are concentrate, water and sugar or sweetener and carbon dioxide. The concentrate is the ingredient that determines the specific flavor of the beverage.

Application

Mixing in soft drink blending process takes place in two different phases. First the soft drink concentrate is mixed with sugar solution (about 60 Brix). Then this premixture is blended with water to the final solution.

Blended soft drink solution is led to a container where the carbonating takes place. After this the product is ready to be bottled.

There are two ways in blending: batch process and continuous blending. In case of batch process water and concentrate are mixed in large tanks. The stirrers in the tank ensure the homogenous blend.

More advanced technique is continuous blending. The product is normally blended to a Brix level slightly higher than the one of the final product. The final concentration is reached by injecting a relatively small amount of water. After this the solution passes a static or dynamic mixer and is ready for the final concentration measurement just before bottling.

Installation

K-Patents Sanitary Refractometer PR-03-A is used to measure and control the concentration of the blended product. A typical measurement range is 10-15 Brix at a temperature of 10-20°C (50-68°F).

Depending on the blending process the installation can vary a little. In batch process the instrument can be installed directly into the tank or in a circulation line. In continuous blending process the concentration is measured after the final blender.

Thanks to the accuracy of PR-03-A great savings in expensive raw materials are easily achieved.