GRAPE MASH, WINE

Typical end products
Wine.

Chemical curve: R.I. per Oechsle (°Oe) at Ref. Temp. of 20˚C

Introduction

There are two main steps in wine production: the growing of the grapes and the processing of the grapes into wine.

There are growers who make no wine, and there are wine producers who have no vineyards and consequently buy grapes from growers.

If the wine producer receives grapes from various vineyards, each crop supplied is processed separately. The price paid for each separate crop depends on the quantity and the quality of the grapes. The main quality factor is sweetness of the grape, as the final alcohol in the wine is given by the sugar content in the grape.

Application

The grapes are received, sorted and ground to produce the sugar rich must. The quality, and therefore the value, of the must depends on the sugar content and is measured in terms of °Oechsle, °Brix or °Baumé.

The sugar concentration varies within the batch. It is very difficult to determine a value for the whole crop, and consequently the payment to be given to the producer without continuous measurement.

Instrumentation and installation

The K-Patents Process Refractometer PR-43-AC is used to measure the sugar concentration continuously in each batch of mashed grape. The calculated average value of sweetness is used to determine a fair payment for the producer.

The K-Patents refractometer is installed directly in the must pipe before the must is distributed between the various tanks. The must, which is pumped directly from the grinder contains a high quantity of suspended solids such as seeds and peel. The K-Patents refractometer has a digital sensing technology, which is uninfluenced by the presence of grape solids. Typical measurement range is 0-140 °Oechsle and the temperature is 15-25 °C (59-77 °F).
<table>
<thead>
<tr>
<th>Instrumentation</th>
<th>Description</th>
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<tbody>
<tr>
<td>K-Patents Sanitary Compact Refractometer PR-43-AC</td>
<td>for hygienic installations in small pipe line sizes of 2.5 inch and smaller. The PR-43-AC refractometer 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, I-clamp or Varinline® connection.</td>
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<tr>
<td>User Interface</td>
<td>Selectable multichannel MI, compact CI or a web-based WI user interface options allow the user to select the most preferred way to access and use the refractometer measurement and diagnostics data.</td>
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<tr>
<td>Measurement range</td>
<td>Refractive Index (nD) 1.3200 – 1.5300, corresponding to 0-100 Brix.</td>
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