

Wort Measurement in Beer (°Plato)

Introduction

One of the most important values in brewing is the sugar content of wort. This dissolved sugar is mainly derived from malt, but also includes other ingredients and is referred to as "extract".

Fermentation typically takes one to two weeks, and during this time, the yeast present in wort converts the wort extract into new yeast cells, ethanol, CO₂ and flavors – steadily decreasing the extract quantity over time.

To monitor this process, brewers typically measure density or specific gravity (SG) over time, as it quantifies the concentration of the extract and gives an indication of what is happening during fermentation. The SG is converted into sugar content in °Plato (°P), and this value is plotted on a fermentation curve over time to give the user a graphical overview of what is happening.

1°Plato = 1 g extract in 100 g wort

Using the Densito, the measured density is automatically compensated to 20 °C and is displayed in °Plato.



Measurement procedure

To verify the accuracy of the Densito, a water standard was measured with the test method.

Bubbles from fermentation can disturb the density measurement; therefore, degassing prior to measurement is necessary.

Measurement parameters

Fill speed: Medium
Measurement reliability: Medium
Measurement scale: °Plato @ 20.0 °C

Results

The results of the measurements are stored automatically in the Densito and can be viewed at any time on the display. Furthermore, they can be printed or exported to EasyDirect™ PC software for further advanced evaluation and the automatic creation of fermentation curves.

Day	Wort [° Plato]	D (n=2)
1	10.3	0.15
2	8.4	0.15
3	6.7	0.15
4	4.7	0.15
5	3.5	0.20
6	2.6	0.20
7	2.5	0.15

Table 1: Mean results and difference (D) of wort measurements

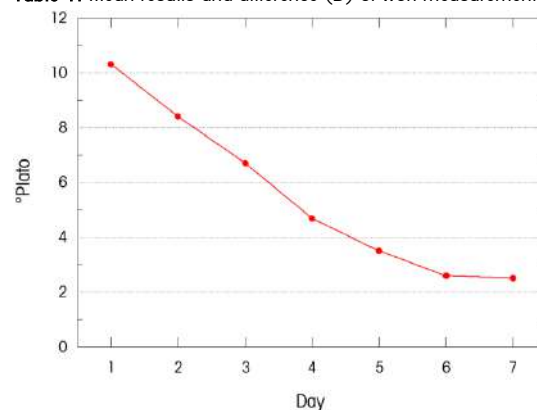


Fig. 1: Wort Extract measurements of one week of fermentation

Samples and test standards

- Wort during fermentation
- Water standard for density verification

Instruments and accessories

- Densito (30330857)
- Protective Cover (30330860)
- Water Standards (51325005)
- EasyDirect™ PC Software (30451628)

Further information

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