Fast and efficient quality monitoring for breweries

Gallery Plus Beermaster
Automated discrete industrial analyzer
Improving productivity

Thermo Scientific™ Gallery™ Plus Beermaster is a fast bench top system dedicated for beer, wort and malt analysis. Simultaneous automated determination of analytes, like beta-glucan, FAN and SO$_2$, from the same single sample offers fast sample turn around and expands laboratories analytical capability. Increased efficiency in controlling the beer quality reduces costs and improves productivity in breweries.
Time and cost savings
unique automated bitterness analysis

Gallery Plus Beermaster is automating labor-intensive bitterness testing and saving significant amount of time in sample pretreatment and analysis.

- During the automated process, the beer bittering substances are first extracted from interfering compounds present in the sample matrix and then measured at 275 nm.
- Manual sample preparation is minimal as only a shaking procedure is needed for degassing.
- One sample measurement takes 10 minutes, releasing valuable hands-on time compared to manual or semi-automated methods. In a typical workload when several samples are measured, a bitterness result is reported every 7 minutes.
- The only daily maintenance needed are the automated start up and stand by procedures taking 5 minutes.
Greater efficiency in quality monitoring

- Various colorimetric tests can be run simultaneously
- Low reagent volumes guarantee cost efficient testing
- Unique automated pretreatment and measurement for bitterness

- Fast and precise malt analysis of important brewing indicators
- Easy and eco-friendly automation for controlling the brewing process
- Several water analysis also possible

Intuitive user-interface
Simple and easy operation
all analysis steps are automated

Sample disk for 6 racks: 9- or 18-pos. sample racks. 60-pos. blocks for automated bitterness sample pretreatment. 6-pos. racks for bitterness reagents.

Reagent disk for 42 reagents. Bar-coded reagent vials provide easy and reliable identification.

Cuvette loader for 360 cells. The unique low-volume cuvette design guarantees low reagent costs and minimizes the amount of reagent waste.

Effective mixer to stir samples and reagents.

Temperature controlled incubator for 90 cuvette cells. The use of disposable cuvettes eliminates carry-over risks.

The analyzer is self-contained with no need for external water or drainage connections.

Intuitive user-interface
easy-to-use, easy-to-learn

Reagent and test parameters are electronically uploadable.
Ensuring confidence in the quality of results, the methods used for beer, wort and malt analysis in the Gallery Plus Beermaster are well known enzymatic and colorimetric chemistries optimized to the result levels of the international reference methods like ASBC, EBC and MEBAK. Ready-to-use liquid reagents eliminate reagent preparation saving time in the daily work. Moreover, the volume optimized system kits minimize reagent waste.

**Compliance and confidence**

colorimetric tests according to the international reference methods

The reagent usage and expiration date are automatically monitored in real-time.

**Thermo Scientific System Reagents**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Component</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>D-Glucose</td>
<td>pH (colorimetric)</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>D-Glucose + D-Fructose</td>
<td>Total Polyphenol</td>
</tr>
<tr>
<td>Alpha-Amino Nitrogen (NOPA)</td>
<td>D-Glucose + D-Fructose + Sucrose</td>
<td>Total Protein (Biuret)</td>
</tr>
<tr>
<td>Ammonia</td>
<td>Glycerol</td>
<td>SO₂</td>
</tr>
<tr>
<td>Beta-Glucan</td>
<td>Total Iron</td>
<td>Sucrose (Total Glucose)</td>
</tr>
<tr>
<td>Bitterness</td>
<td>D-Lactic acid</td>
<td>For sample color:</td>
</tr>
<tr>
<td>Calcium</td>
<td>L-Lactic acid</td>
<td>430 nm filter</td>
</tr>
<tr>
<td>Citric acid</td>
<td>Magnesium</td>
<td></td>
</tr>
<tr>
<td>Ethanol low</td>
<td>L-Malic acid</td>
<td></td>
</tr>
<tr>
<td>D-Fructose</td>
<td>Oxalic acid</td>
<td></td>
</tr>
</tbody>
</table>

(*) non-system reagent
Thermo Scientific Gallery Plus Beermaster

- Discrete cell technology allows for simultaneous measurement of several different tests for the same sample
- BCM unit for automated bitterness measurement
- Capacity: up to 350 tests /hour with one-reagent colorimetric methods
- Typically 8 bitterness tests /hour (BCM unit), first result in 10 minutes
- Continuous access to samples, reagents and cuvettes without interrupting test processing
- Sample disk for 6 racks, reagent disk for 42 reagents
- Filter range: 275, 340 - 880 nm
- Allows to set-up user-specific applications

Dimensions of the analyzer:
94 cm (Width), 70 cm (Depth), 62 cm (Height) / 130 cm (Height) with the open cover
37 in (Width), 27.6 (Depth), 24.4 in (Height) / 51 in (Height) with the open cover
no need for external water or drainage connections