Thermo Scientific™ Gallery™ Plus Beermaster is discrete photometric analyzer dedicated for beer, malt and wort quality control and analysis. Sample oriented Beermaster system is capable of random access testing. Many different applications, like automated bitterness, beta-glucan, pH and SO₂, can be run simultaneously from a single sample. Panels of system applications are predefined into the analyzer. However, new user-specific applications can be defined.

The Bitterness unit (BCM) in Gallery Plus Beermaster includes extraction column for bitterness measurement. In the automated process, prior to photometric analysis at 275 nm, the beer bittering substances are extracted from interfering compounds present in the sample matrix. Beermaster employs colorimetric end-point and kinetic as well as turbidimetric and bichromatic reactions with or without sample blanking. System supports automated standard addition measurement method for complex sample matrices.

**Measurement**

Single channel interference filter photometer with beam splitting reference, 12 filter positions.

<table>
<thead>
<tr>
<th>Filter range:</th>
<th>275, 340 - 880 nm</th>
</tr>
</thead>
</table>
| Measurement temperature:| 25 - 60 °C, no cooling
- preset to 37 °C |
| Light source:           | Xenon flash lamp  |
| Absorbance range:       | 0 - 3.5 A
- resolution of 0.001 A
- reproducibility of SD <0.005 A at 2 A |

**Reaction vessels**

Discrete disposable cuvette. Continuous access to cuvettes without interrupting test processing.

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### On-Board Capacity:

<table>
<thead>
<tr>
<th>360 measurement cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 36 cuvettes with 10 reaction cells</td>
</tr>
<tr>
<td>- 1 to 3 hour walk-away time depending on workload</td>
</tr>
</tbody>
</table>

**Reaction End Volume:**

120 - 300 µL

**Samples**

Continuous access to samples without interrupting test processing. Automatic identification via internal barcode reader.

<table>
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<th>On-Board Capacity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>max 6 racks</td>
</tr>
<tr>
<td>- 9 or 18-position sample rack</td>
</tr>
<tr>
<td>- 60-position block for automated sample pretreatment in bitterness measurement and 6-position rack for bitterness liquids</td>
</tr>
</tbody>
</table>

**Sample Volumes:**

2 - 120 µL
- possibility to extend up to 240 µL

**Sample Containers:**

0.5 mL, 2.0 mL, 4.0 mL cups and sample tubes (diameter 12 - 16 mm, length 75 - 100 mm)

**Sample Barcodes**: Code 128 and barcodes USS Codabar, Interleaved 2 of 5 and Code 39 with a check digit

**Sample Dispensing:**

CV ≤2% for volumes ≥2 µL

† used with sample tubes in a 9-pos. sample rack

**Reagents**

Continuous access to reagents without interrupting test processing. Automatic identification via internal barcode reader. Clearly displayed real-time reagent volume and remaining test capacity. Up to four reagent additions per test.
Capacity:
Up to 350 tests/hour with one-reagent colorimetric methods
Typically 8 bitterness tests / hour with the BCM unit

Dimensions and Weight:
94 cm (width) x 70 cm (depth) x 62/130 cm (height/with open cover), 110 kg (weight).
Separate workstation.

Power Requirements:
100 - 240 VAC ±10%, 50-60 Hz ±5%, 300 W

Deionized Water Consumptions:
2.5 litres/ hour

Average Noise Level at 1 meter:
<60 dB(A)

Environmental Conditions:
Operating temperature range of 18 - 30 °C, humidity 40-80% (non-condensing)

Calibration
Factor, bias, linear, logit-log, spline, 2nd order and point-to-point calibration. Method-dependent use of individual calibrators or automatically diluted series from a stock calibrator. Previous curve comparison available.

Quality Control

Dilutions
Automatic sample pre-dilution. Automatic dilution of over-range tests with automatic rerun. Addition of manual pre-dilution value for result calculation.

Data Management
Windows® workstation with graphical user interface. Data input online, via mouse, touchscreen, keyboard and barcode reader. Different user groups can have different access rights. Different user interface language versions available.

<table>
<thead>
<tr>
<th>LIS Interface</th>
<th>CLSI LIS02-A2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Interface</td>
<td>RS-232 or TCP/IP</td>
</tr>
<tr>
<td>Result Reports</td>
<td>Collated by sample, manual entry of off-line results allowing for fully collated result reports, results calculated from both measured and off-line results. Spreadsheet reporting for further calculations possible.</td>
</tr>
<tr>
<td>Traceability</td>
<td>Full traceability with long term storage of results including associated calibrations and reagent lot data.</td>
</tr>
</tbody>
</table>

Ordering Code:
9862 2001 Gallery Plus Beermaster (BCM)

Find out more at thermofisher.com/discreteanalysis