Speed and flexibility

Automate your environmental and industrial analysis

Food and Beverage Testing
Water Quality Monitoring
Nutrient Analysis
Increase efficiency...  
with automated discrete photometry

Thermo Scientific™ Gallery™ and Gallery™ Plus discrete analyzers are easy to use, automated systems that allow laboratories to simplify their testing with the dual benefits of time and cost savings. All necessary analysis steps are automated, providing true walk-away time for the operator. Self-contained benchtop Gallery analyzers occupy a small footprint, facilitating installation in any size laboratory.

Improve productivity...  
reproducible results in minutes

The discrete cell technology of Gallery analyzers offers faster, reproducible results with less sample and reagent waste. All necessary analysis steps are automated and low detection levels can be achieved. This technology has been successfully adapted to over 50 food and beverage and environmental applications.

- Automatic start up and shut down protocols; no warm up time required.
- Identification is automated by a barcode reader.
- Samples and reagents can be loaded without interrupting the current cycle.
- Accommodates a variety of sample cups and primary tubes.
- Minimal sample pretreatment required.
- Several blanking possibilities eliminate sample matrix effects.
- Dilutions and repeat analyses are handled automatically.
- Results are ready within minutes with a realized reduction in hands-on time.
- User interface is easy to operate, making information management simple.
Flexible and easy to use… parallel measurement of multiple analytes

Once loaded all steps of the analysis process are fully automated. The Gallery analyzer includes a combined sample and reagent disk for a maximum capacity of 45 samples with the ability to run as many as 200 tests per hour. The Gallery Plus analyzer can accommodate 54 samples and 42 reagents in its separated sample and reagent disks with the capability to run as many as 350 tests per hour.

Both Gallery instruments provide an integrated platform for two measurement techniques, photometric and electrochemical (ECM) which can be run simultaneously. Parallel determination of several analytes from a single sample as well as the presence of several automated features ensures analytical efficiency. Each individual reaction cell is isolated and temperature stabilized enabling highly controlled reaction conditions.

- Applications include food, beverage, water, soil, and industrial quality control.
- No risk of carry-over or requirement to wash glassware.
- Measurements cover a large concentration range with excellent reproducibility.
- User-specific applications can be developed to meet individual testing needs.
- An integrated platform, photometric and electrochemical, which can be run in parallel.
- No need for an external source of water.

Gallery Plus analyzer interior  Cuvette loader  Mixer arm

Incubator range from 25 to 60 ºC  Optional electrochemical unit  Self-contained water tank
Results available quickly

Versatile Analysis

In wine production, sugars, acids, alcohol, and sulfite analysis are important parameters for production and quality control. Gallery analyzers require no advanced preparation time and samples can be added at any time without interrupting the current run. Multiple tests can be done on a single sample with accurate, reproducible results available in as little as ten minutes. Method changeover time is eliminated since each reaction occurs in an individual cuvette.

Efficient Analysis

Wastewater and process water need to be tested for many analytes including ammonia, nitrite and phosphorus. Gallery analyzers are flexible, can accommodate multiple sample types, and simultaneously analyze various parameters. Testing is efficient, hands-on time is significantly reduced, and waste is minimized. These instruments are easy to use and need no additional priming or method changeover time. Results are available quickly even if additional tests are requested that interrupt the routine workflow.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Response (A)</th>
<th>Results (g/L)</th>
<th>Reference (g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>0.001</td>
<td>0.016</td>
<td>0</td>
</tr>
<tr>
<td>Dry Wine 1</td>
<td>0.167</td>
<td>0.598</td>
<td>0.586</td>
</tr>
<tr>
<td>Dry Wine 2</td>
<td>0.337</td>
<td>1.226</td>
<td>1.22</td>
</tr>
<tr>
<td>Dry Wine 3</td>
<td>0.502</td>
<td>1.837</td>
<td>1.83</td>
</tr>
<tr>
<td>Dry Wine 4</td>
<td>0.666</td>
<td>2.445</td>
<td>2.44</td>
</tr>
<tr>
<td>Dry Wine 5</td>
<td>0.793</td>
<td>2.915</td>
<td>2.928</td>
</tr>
</tbody>
</table>

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Glucose calibration, dry white wine

Ammonia

Phosphate

Nitrite

Total Phosphorus
Automated discrete analysis... reduce hands-on time in your analytical process

Discrete Analyzer Workflow

Start

Pre-run stabilization (minimum of 30 minutes)

Run QC and calibration

Load samples and reagents

Results in 10 minutes

Notes:
- Virtually unlimited simultaneous analysis of multiple analytes.
- Easy to operate with true walk-away freedom for the technician.
- Sample volume in µL reducing reagent and waste disposal costs.

Standard Continuous Flow Analysis (CFA) or Segmented Flow Analysis (SFA) Workflow

Start

Pre-run stabilization (minimum of 30 minutes)

Run QC and calibration

Load samples and reagents

Results in 40 minutes

Notes:
- Runs up to 6 tests simultaneously.
- Requires 1–2 dedicated, skilled technicians to monitor the run.
- Sample volume in mL increasing reagent and waste disposal costs.
A complete system solution…
using Thermo Scientific system reagents

Thermo Scientific reagents are ready to go, saving the technician’s time and reducing errors. The unique low volume cuvette design guarantees small reagent volumes, minimizes reagent waste, and as a result reduces reagent costs. Optimized kit sizes and on-board stability further minimize the amount of waste produced and increase cost efficiency.

Ensuring confidence in the quality of results, the methods used for analysis with Gallery analyzers are well known enzymatic and colorimetric chemistries optimized to international reference methods. In addition, certified reagents offer lot traceability and ease of use.

• Continuous monitoring of volume, lot, and expiration date provides real time reagent information.
• Up to 15 times less reagent volumes are used when compared to manual methods.
• A wide range of calibration standards ensure accurate results.
Thermo Scientific System Reagents for Wine and Juice Testing

Acetaldehyde  
Acetic Acid  
Alpha-Amino Nitrogen (NOPA)  
Ammonia  
L-Ascorbic Acid  
Calcium  
Citric Acid  
Color  
Copper  
D-Fructose  
D-Gluconic Acid  
D-Glucose  
D-Glucose + D-Fructose  
D-Glucose + D-Fructose + Sucrose  
Glycerol  
  
Total Iron  
D-Isocitric Acid  
D-Lactic Acid  
L-Lactic Acid  
Magnesium  
L-Malic Acid  
Oxalic Acid  
Potassium  
Tartaric Acid  
Total Acids  
Total Polyphenol  
SO₂ Free  
SO₂ Total  
Sucrose (Total Glucose)

Other Food Testing Parameters with System Reagents

Cholesterol  
Beta-Hydroxybutyrate  
Lactose (Glucose)  
Urea (Ammonia)

Thermo Scientific System Reagents for Water and Soil Testing

Alkalinity  
Ammonia  
Calcium  
Chloride  
Chromium (VI)  
Conductivity  
Fluoride  
Iron (Ferrous)  
Magnesium  
Nitrate  
Nitrite  
pH  
Phosphate  
Silica  
Sulphate  
Total Hardness  
Urea (Ammonia)
<table>
<thead>
<tr>
<th></th>
<th>Gallery Analyzer</th>
<th>Gallery Plus Analyzer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Capacity</strong></td>
<td>Up to 200 photometric tests per hour</td>
<td>Up to 350 photometric tests per hour</td>
</tr>
<tr>
<td><strong>Sample Capacity</strong></td>
<td>Maximum of 45 using 5 nine position sample racks and 1 six position reagent rack</td>
<td>Maximum of 54 using 6 nine position sample racks</td>
</tr>
<tr>
<td><strong>Reagent Capacity</strong></td>
<td>Maximum of 30 using 1 nine position sample rack and 5 six position reagent racks</td>
<td>Maximum of 42 reagent positions</td>
</tr>
<tr>
<td><strong>Walk-away Time</strong></td>
<td>Up to 2 hours</td>
<td>Up to 3 hours</td>
</tr>
<tr>
<td><strong>Water Consumption</strong></td>
<td>1.5 liters per hour</td>
<td>2.5 liters per hour</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>75 cm W x 70 cm D x 62 cm H (closed)</td>
<td>94 cm W x 70 cm D x 62 cm H (closed)</td>
</tr>
<tr>
<td></td>
<td>75 cm W x 70 cm D x 130 cm H (open)</td>
<td>94 cm W x 70 cm D x 130 cm H (open)</td>
</tr>
<tr>
<td></td>
<td>27.5 in W x 27.6 in D x 24.4 in H (closed)</td>
<td>37 in W x 27.6 in D x 24 in H (closed)</td>
</tr>
<tr>
<td></td>
<td>27.5 in W x 27.6 in D x 57 in H (open)</td>
<td>37 in W x 27.6 in D x 51 in H (open)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>85 kg (187 lbs)</td>
<td>110 kg (242 lbs)</td>
</tr>
<tr>
<td><strong>Additional Features</strong></td>
<td>Continuous access to samples, reagents, and cuvettes without interrupting the test cycle.</td>
<td>Water Consumption</td>
</tr>
<tr>
<td></td>
<td>Spectral range from 275–880 nm with different filter configurations available.</td>
<td>Continuous access to samples, reagents, and cuvettes without interrupting the test cycle.</td>
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<td></td>
<td>Bi-directional LIMS connection available.</td>
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<td></td>
<td>Optional electrochemical unit available for conductivity and pH measurements.</td>
<td>Bi-directional LIMS connection available.</td>
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</table>

thermocientific.com/gallery
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