The Formate Assay developed for the Cedex Bio and Cedex Bio HT Analyzers provides fast and accurate quantitative measurements in cell culture and fermentation media. Formate is a metabolic intermediate relevant in the fermentation of bacteria and yeast. The Assay principle is based on the oxidation of formate to bicarbonate by NAD in the presence of formate dehydrogenase (FDH). The increase of NADH is directly proportional to the formate concentration and measured photometrically at 340 nm.

**Formate Assay for Cedex Bio and Cedex Bio HT Analyzers**

*High performance and reproducibility with accurate data*

Trust results to make high confidence decisions
- Accurate results over a wide linear measuring range
- Extended range with automated on-board dilution

**Figure 1:** Formate was spiked into RPMI cell culture medium and measured using the Cedex Bio HT Analyzer.
(Verification data of Roche R&D)

**Benefit from a wide and sensitive measuring range**

<table>
<thead>
<tr>
<th>Formate Bio and Formate Bio HT</th>
<th>Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.2 - 20 mmol/L, 9 - 900 mg/L</td>
</tr>
<tr>
<td></td>
<td>up to 2 mol/L, 90 g/L with automated on-board dilution</td>
</tr>
</tbody>
</table>

**Conserve sample with low volume requirement**
- Sample volume of ≤ 5 µl per test

For use in quality control/manufacturing process only.
Rely on precise results

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>1.0 mmol/L</td>
<td>8.0 mmol/L</td>
<td>15.0 mmol/L</td>
</tr>
<tr>
<td><strong>CV in-run</strong></td>
<td>0.8 %</td>
<td>0.3 %</td>
<td>0.4 %</td>
</tr>
<tr>
<td><strong>CV inter-run</strong></td>
<td>1.9 %</td>
<td>1.9 %</td>
<td>2.1 %</td>
</tr>
</tbody>
</table>

Precision was determined in samples of three concentration levels. Coefficients of variation (CV) were calculated for in-run precision (n=21) and inter-run precision (on 10 days). Representative performance data from Cedex Bio HT Analyzers are shown. Results obtained in individual laboratories may differ.

Save time with improved workflow efficiency
- Ready-to-use reagents
- Long on-board and calibration curve stability
- Barcoded reagents
- Pre- and post-dilution capability

<table>
<thead>
<tr>
<th></th>
<th>Formate Bio</th>
<th>Formate Bio HT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On-board stability</strong></td>
<td>21 days</td>
<td>140 days</td>
</tr>
<tr>
<td><strong>Calibration interval</strong></td>
<td>84 days</td>
<td>140 days</td>
</tr>
</tbody>
</table>

Take control of your bioprocess with the Cedex portfolio
- Broad and expandable assay menu
- 2 instrument platforms with identical technology, menu and reagents to fit throughput and automation needs
- Solutions for development and manufacturing environments

Ordering information

<table>
<thead>
<tr>
<th>Product</th>
<th>Pack size</th>
<th>Catalog number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formate Bio</td>
<td>4 x 50 tests</td>
<td>07 705 590 001</td>
</tr>
<tr>
<td>Formate Bio HT</td>
<td>200 tests</td>
<td>07 705 603 001</td>
</tr>
<tr>
<td>Calibrator D Bio</td>
<td>6 x 1 ml</td>
<td>07 368 321 001</td>
</tr>
<tr>
<td>Control D Level 1 Bio</td>
<td>6 x 1 ml</td>
<td>07 368 178 001</td>
</tr>
<tr>
<td>Control D Level 2 Bio</td>
<td>6 x 1 ml</td>
<td>07 368 186 001</td>
</tr>
<tr>
<td>Control D Level 3 Bio</td>
<td>6 x 1 ml</td>
<td>07 368 194 001</td>
</tr>
</tbody>
</table>

Regulatory disclaimer
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