**Features of the Cellometer X2**

- Dual Fluorescence and bright field imaging: staining of both live and dead cells in yeast samples
- User-friendly Software and Assay Analysis: Enhanced integrated user interface, rapid training, auto-save options
- Fast Results: Obtain cell images, counts, size measurements, and viability calculations in 60 seconds
- Small Sample Size: Only 20 µl of sample

**Advantages of Cellometer Image Cytometer**

- Maintenance-free System
- Automated Data Management
- Pattern Recognition Software
- Cell Imaging
- Pattern Recognition Software
- Automated Data Management
- Pre-set assay and automated reports
- Archive sample images and auto-save results
- User-Friendly Software and Assay Selection
- Dual Fluorescence and Bright Field Imaging

---

**Learn why thousands of users, including the top ten pharmaceutical companies, trust Cellometer.**

**On-Line Demonstrations** are completed in just 20 to 30 minutes and provide an overview of how Cellometer works using existing images of cells that interested you.

**Technical Seminars** are an excellent way to introduce Cellometer systems to a lab group or to collaborate in different laboratories within an organization. A trained specialist will discuss and demonstrate the capabilities and advantages of Cellometer Image cytometer.

**For more information, visit www.nexcelom.com**

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**Cataloging Kit**

<table>
<thead>
<tr>
<th>Description</th>
<th>Instrument Compatibility</th>
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Phone: 978.327.5340

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Email: info@nexcelom.com
セロメーターX2 イメージサイトメーター
酵母や小さい細胞の解析に最適です。

セロメーターX2の特徴
- 生物的な細胞形状や生死判定の確認
- 夾雑物をカウント対象から除外
- Image Cytometer
- 通常と異なる形状もカウント可能
- 画像をエクスポートし、プレゼン資料や論文へ使用可能
- 測定メニューと自動レポートを標準装備
- サイズの違いによる識別
- 装置本体のメンテナンス不要
- 凝集した細胞も分離して識別
- サンプル画像と自動データ保存
- 使い捨てのカウンティングチャンバーで洗浄不要

セロメーターの特徴
- メンテナンスフリーサイド
- 自動データ管理
- 精密度高さを実現するための細胞認識ソフトウェア

セロメーターを信頼する理由を
トップ製薬企業をはじめとするユーザーが
できます。※英語ビデオついて知ることができます。
下記URLにて、セロメーターの使い方や測定原理の概要に
できます。

http://www.nexcelom.com/Support/Cellometer-Video-
デモンストレーション

アプリケーションスペシャリストが訪問し、実際の細胞サ
プルを用いての測定をハンズオンでお見せします。セロ
メーターが

E-mail:info_ap@digital-biology.co.jp
電話:03-5834-0810

トミーデジタルバイオロジー株式会社へ
ご用命は

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酵母の解析

酵母の細胞周期解析

シングルセルカウントと可能です。細胞濃度や生存率は明視野および蛍光測定によって算出することが可能です。

酵母の生存率と生育能

酵母サンプルとアクリジンオレンジ（AO）・プロピオドミウムイオドサイド（PI）を1:1で混合し蛍光で

酵素蛍光染色による生存率測定

Propidium Iodide (PI)に

2色蛍光イメージングモード

1色蛍光イメージングモード

明視野イメージングモード

Death/ viability of yeast cells could be counted without further dilution. Samples from 4 x 10^7–5 x 10^7 cells/ml can be counted without further dilution. The %CV at each concentration was below 10%. The results indicate the accuracy of the Cellometer X1 instrument in assessing the viability of yeast cells.

Cellometer Performance

Performance of the Cellometer X1 Image Cytometer

Table of results for cell concentration and viability using bright-field and Propidium Iodide (PI) stain.

<table>
<thead>
<tr>
<th>Concentration (Cells/ml)</th>
<th>Bright-field</th>
<th>Propidium Iodide</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00E+07</td>
<td>1.0E+07</td>
<td>1.0E+07</td>
</tr>
<tr>
<td>2.00E+07</td>
<td>2.0E+07</td>
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</tr>
<tr>
<td>5.00E+07</td>
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</tbody>
</table>

The results depict the dynamic range of cell concentration measured by Cellometer X1 instrument. The %CV at each concentration was below 10%. The %CV at each concentration was below 10%.

How It Works

取巻きピペット20 µl of Cell Sample

挿入カウンティングチャンバー

Select Assay & Click Count

Get Results
Yeast Used in Brewing Industry

In general, yeast strains used in the brewing industry are very clean. They are counted using Cellometer X1 and X2 Image Cytometers. Concentration and viability are measured using Cellometer bright field and fluorescent images.

### Yeast Concentration Measurement by Bright Field Analysis

#### Yeast Cell Cycle Analysis

- Yeast samples are stained 1-to-1 with a mixture of acridine orange (AO) and propidium iodide (PI)
- AO stains live yeast cells green and dead cells red
- PI stains yeast cells red

#### Yeast Viability and Vitality

- Yeasts are stained 1-to-1 with a mixture of AOPI
- Fluorescence images are used to count dead cells, while fluorescent images are used to obtain total cell count

### Yeast Concentration & Viability Measurement by Bright Field & Fluorescence

#### Cell Cycle Analysis

- Cell Cycle Analysis
- Cell cycle analysis is used to determine the position of a cell in the cycle. The plot shows the yeast cell cycle.
- The cell cycle can be divided into four stages: G1, S, G2, and M.
- The cycle is defined by the presence of染色体.

#### Yeast Viability & Fluorescence

- Yeast viability is determined by the exclusion of PI stain.
- Yeast cells that exclude PI are considered viable.
- Yeast cells that exclude PI are considered dead.

### Performance of the Cellometer X2 Image Cytometer

#### Concentration Dynamic Range

- The viability dynamic range is 0 - 100% for Cellometer X2 Image Cytometer using dual-fluorescence AOPI stain.
- The %CV at each concentration was below 10%.
- The %CV at each concentration was calculated and accuracy of the Cellometer X2 instrument was assessed.

#### Viability Dynamic Range

- Viability average was calculated and accuracy of the Cellometer X2 instrument was assessed.
- The %CV at each concentration was calculated and accuracy of the Cellometer X2 instrument was assessed.

### Performance of the Cellometer X1 Image Cytometer

#### Concentration Dynamic Range

- The viability dynamic range is 0 - 100% for Cellometer X1 Image Cytometer using dual-fluorescence AOPI stain.
- The %CV at each concentration was below 10%.
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### Yeast Cell Cycle Analysis

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### Cellometer X2 Performance

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Yeast Concentration Measurement by Bright Field Analysis

- Visible field
- Chain-Forming Cell Count
- 7.0E + 7

Yeast Concentration & Viability Measurement by Bright Field & Fluorescence

- Yeast concentration and viability are measured using Cellometer bright field and fluorescent images.
- Single fluorescence imaging mode
- Bright field imaging mode

Yeast Viability Measurement by Fluorescent Enzymatic Stain

- Using Propidium Iodide (PI)
- Yeast samples are stained 1-to-1 with AOPI.
- Live yeast cells fluoresce green while fluorescent images are used to count dead cells.

Yeast Chemotaxis

- Single Cell Count
- Cell type wizard for creating new cell type parameters
- Mean diameter and cell size distribution

ASSAYS

- Yeast Viability
- AOPI Viability
- Yeast AOPI Viability
- Yeast Viability CFDA AM
- Yeast Vitality by Fluorescent Enzymatic Stain
- Yeast Viability and Vitality
- Yeast Concentration & viability using AOPI and propidium iodide (PI) dual-fluorescence
- Yeast samples are stained 1-to-1 with AOPI and fluorescent images are used to obtain total cell count, while fluorescent images are used to measure the active yeast cells.
- For total yeast count and fluorescent images are used to measure the active yeast cells.
- Using Propidium Iodide (PI)

Yeast Viability and Vitality

- Yeast viability analysis by dual fluorescence
- Small chain yeast concentration analysis
- Yeast viability analysis
- Yeast cell cycle analysis
- Yeast viability using CFDA-AM

Yeast Cell Cycle Analysis

- Yeast Cell Cycle Staining Kit from Nexcelom Bioscience
- Standard baker’s yeast stained with PI

How It Works

- Automated Automated Platelet Counting in Whole Blood
- Flurochrome-based platelet concentration assay
- Automated platelet counting in whole blood

CV(%) 5.61 3.64
STDEV 2.28E+06 2.5%
AVE 4.07E+07 69.0%