SMALL SCALE HOLLOW FIBER BIOREACTOR

- High density cell culture: $5 \times 10^{10}$ cells
- Single-use cultureware includes:
  - 1.5m² hollow fiber cartridge
  - High-efficiency oxygenator
- Linear scale-up to automated systems
- Manual control
- Easy set-up

APPLICATIONS

- Ideal for:
  - <1g production of challenging proteins
  - Feasibility runs for C3’s automated hollow fiber systems
  - Manufactures expressed proteins from mammalian and insect cell lines:
    - Monoclonal antibodies
    - Recombinant proteins
  - Supports adherent and suspension cells

FEATURES

- Perfusion
- Gas Exchange Cartridge
- Continuous Harvest
- No Passaging Required
- Extended Runs (Weeks to Months)
- Concentrated Harvest
- Single-Use

BENEFITS

- Supports high cell density for maximum productivity
- Improves cell health compared to simplistic silicone tubing
- Decreases labor, protects quality
- Reduces labor
- Flexible production schedules
- Reduces downstream processing
- Ready-to-Use, rapid turnaround

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Weight</th>
<th>0.9kg</th>
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<tbody>
<tr>
<td>Equipment Requirements</td>
<td>Peristaltic pump</td>
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<tr>
<td></td>
<td>2 pump heads</td>
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<tr>
<td></td>
<td>CO₂ incubator</td>
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<tr>
<td>Dimensions (cm)</td>
<td>12 W x 20 D x 33 H</td>
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Cells grow to a tissue-like density outside the hollow fibers to maximize production (EM photo of hollow fiber cross section)

Flexible Facilities: Fits in a standard CO₂ incubator