Industrial Scale Suspension Culture of Living Cells

Description: The submersed cultivation of organisms in sterile containments or fermenters has become the standard manufacturing procedure, and will remain the gold standard for some time to come. This book thus addresses submersed cell culture and fermentation and its importance for the manufacturing industry. It goes beyond expression systems and integrally investigates all those factors relevant for manufacturing using suspension cultures. In so doing, the contributions cover all industrial cultivation methods in a comprehensive and comparative manner, with most of the authors coming from the industry itself. Depending on the maturity of the technology, the chapters address in turn the expression system, basic process design, key factors affecting process economics, plant and bioreactor design, and regulatory aspects.

Contents:

PART I: SUSPENSION CULTURE OF BACTERIA, YEASTS, AND FILAMENTOUS FUNGI

Bacterial Suspension Cultures (Patrick Sagmeister, Mohammad Jazini, Joachim Klein, and Christoph Herwig)

Yeast Suspension Culture (Diethard Mattanovich, Carmen Jungo, Jana Wenger, Michal Dabros, and Michael Maurer)

Filamentous Fungi Fermentation (Anders Norregaard, Stuart M. Stocks, Mads O. Albaek, John M. Woodley, and Krist V. Gernaey)

PART II: SUSPENSION CULTURE OF ALGAE AND PLANT CELLS

Microalgae Grown Under Heterotrophic and Mixotrophic Conditions (Karin Kovar, Pavel Pribyl, and Markus Wyss)

Recombinant Protein Production with Microalgae (Alexandre Lejeune, Rémy Michel, and Aude Carlier)

Suspension Culture of Microorganisms (Algae and Cyanobacteria) under Phototrophic Conditions (Peter Bergmann, Astrid Nissen, Lars Beyer, Peter Ripplinger, Walter Trösch)

Suspension Culture of Plant Cells under Heterotrophic Conditions (Nicole Imseng, Stefan Schillberg, Cornelia Schürch, Daniel Schmid, Kai Schütte, Gilbert Gorr, Dieter Eibl, and Regine Eibl)

Suspension Culture of Plant Cells under Phototrophic Conditions (Holger Niederkrüger, Paulina Dabrowska-Schlepp, and Andreas Schaaaf)

PART III: SUSPENSION CULTURE OF PROTOZOA, INSECT CELLS, AVIAN CELLS, AND MAMMALIAN CELLS

Suspension Culture of Protozoan Organisms (M.W.W. Hartmann and R. Breitling)

Industrial Large Scale of Suspension Culture of Insect Cells (António Roldão, Manon Cox, Paula Alves, Manuel Carrondo, and Tiago Vicente)

Avian Suspension Culture Cell Lines for Production of Vaccines and Other Biologicals (Manfred Reiter, Daniel Portsmouth, and P. Noel Barrett)

Large Scale Suspension Culture of Mammalian Cells (Richard M Alldread, John R. Birch, Hilary K Metcalfe, Suzanne Farid, Andrew J. Racher, Robert J. Young, and Mohsan Khan)

PART IV: SUSPENSION CULTURE FOR SPECIAL PRODUCTS
Pillars of Regenerative Medicine: Therapeutic Human Cells and Their Manufacture
(Christian van den Bos, Robert Keefe, Carmen Schirmaier, and Michael McCaman)

Virus Production Under Suspension Conditions (O.-W. Merten, W.A.M. Bakker, J. Vorlop, M. Reiter, G. Visnovsky, V. Jäger, M. Merabishvili, and U. Reichl)

Cultivable Marine Organisms as a Source of New Products (Jean-Michel Kornprobst)

Ordering:
Order Online - http://www.researchandmarkets.com/reports/2755218/
Order by Fax - using the form below
Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
**Fax Order Form**

To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit [http://www.researchandmarkets.com/contact/](http://www.researchandmarkets.com/contact/)

**Order Information**

Please verify that the product information is correct.

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Industrial Scale Suspension Culture of Living Cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Address:</td>
<td><a href="http://www.researchandmarkets.com/reports/2755218/">http://www.researchandmarkets.com/reports/2755218/</a></td>
</tr>
<tr>
<td>Office Code:</td>
<td>SCDKGPGGL</td>
</tr>
</tbody>
</table>

**Product Format**

Please select the product format and quantity you require:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>USD 179 + USD 29 Shipping/Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Copy (Hard Back):</td>
<td></td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

**Contact Information**

Please enter all the information below in **BLOCK CAPITALS**

<table>
<thead>
<tr>
<th>Title:</th>
<th>Mr ☐  Mrs ☐  Dr ☐  Miss ☐  Ms ☐  Prof ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td></td>
</tr>
<tr>
<td>Email Address: *</td>
<td></td>
</tr>
<tr>
<td>Job Title:</td>
<td></td>
</tr>
<tr>
<td>Organisation:</td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td></td>
</tr>
<tr>
<td>Postal / Zip Code:</td>
<td></td>
</tr>
<tr>
<td>Country:</td>
<td></td>
</tr>
<tr>
<td>Phone Number:</td>
<td></td>
</tr>
<tr>
<td>Fax Number:</td>
<td></td>
</tr>
</tbody>
</table>

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: __________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World