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*C12M 3/04* (2006.01) *C12N 1/14* (2006.01)  
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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,  
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,  
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,  
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SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,  
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(54) Title: PORTABLE DEVICE AND METHODS FOR EFFICIENT PRODUCTION OF MICROBES

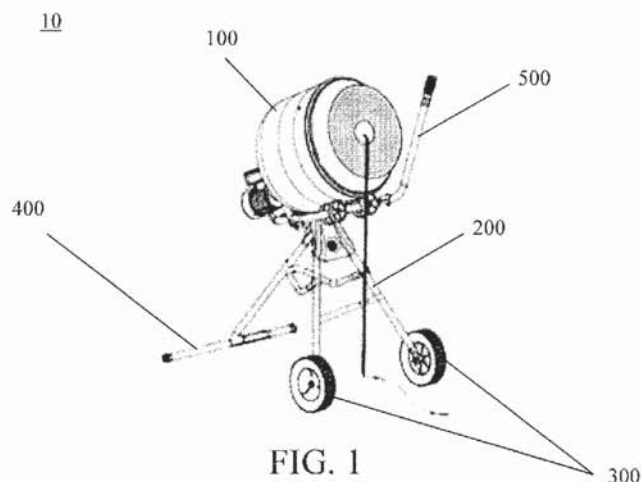


FIG. 1

(57) Abstract: Provided are devices and methods for producing microbe-based compositions that can be used in the oil and gas industry, environmental cleanup, as well as for other applications. The devices and methods can produce scalable, submerged yeast cultures for inoculating larger-scale, on-site fermentation systems. A device can include a rotatable drum mounted on a support frame and a motor connected to the drum and causing the drum to rotate.

# PCT

(PCT Rule 92*bis*.1 and  
Administrative Instructions, Section 422)

To:

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| Date of mailing (day/month/year)<br>01 April 2019 (01.04.2019) |                                                                             |
| Applicant's or agent's file reference<br>LOC.120XC1PCT         | <b>IMPORTANT NOTIFICATION</b>                                               |
| International application No.<br>PCT/US2018/017814             | International filing date (day/month/year)<br>12 February 2018 (12.02.2018) |

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| 1. The following indications appeared on record concerning:<br><input type="checkbox"/> the applicant <input checked="" type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                           |                                                                               |  |                    |  |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |
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| 4. A copy of this notification has been sent to: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> the receiving Office<br/> <input type="checkbox"/> the International Searching Authority<br/> <input type="checkbox"/> the Authority(ies) specified for supplementary search         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> the International Preliminary Examining Authority<br/> <input checked="" type="checkbox"/> the designated Offices concerned<br/> <input type="checkbox"/> the elected Offices concerned<br/> <input checked="" type="checkbox"/> other: FRISTIK, David         </td> </tr> </table> |                                                                                                                                                                                                                                                                           |                                                                               |  |                    |  | <input checked="" type="checkbox"/> the receiving Office<br><input type="checkbox"/> the International Searching Authority<br><input type="checkbox"/> the Authority(ies) specified for supplementary search | <input type="checkbox"/> the International Preliminary Examining Authority<br><input checked="" type="checkbox"/> the designated Offices concerned<br><input type="checkbox"/> the elected Offices concerned<br><input checked="" type="checkbox"/> other: FRISTIK, David |
| <input checked="" type="checkbox"/> the receiving Office<br><input type="checkbox"/> the International Searching Authority<br><input type="checkbox"/> the Authority(ies) specified for supplementary search                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> the International Preliminary Examining Authority<br><input checked="" type="checkbox"/> the designated Offices concerned<br><input type="checkbox"/> the elected Offices concerned<br><input checked="" type="checkbox"/> other: FRISTIK, David |                                                                               |  |                    |  |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |

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## ADVANCE E-MAIL

From the INTERNATIONAL BUREAU

**PCT**NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

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|                                                                       |                                                                                    |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Date of mailing (day/month/year)<br><b>16 March 2018 (16.03.2018)</b> | <b>IMPORTANT NOTIFICATION</b>                                                      |
| Applicant's or agent's file reference<br><b>LOC.120XC1PCT</b>         |                                                                                    |
| International application No.<br><b>PCT/US2018/017814</b>             | International filing date (day/month/year)<br><b>12 February 2018 (12.02.2018)</b> |

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------|
| 1. The following indications appeared on record concerning:<br><input type="checkbox"/> the applicant <input checked="" type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative                                                                                                                                                                                                                                                                                           |                                                                               |                    |
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| 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:<br><input type="checkbox"/> the person <input type="checkbox"/> the name <input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence                                                                                                                                                                                                                        |                                                                               |                    |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Telephone No.                                                                 |                    |
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| 3. Further observations, if necessary:<br>The person identified in Box 1 has been deleted from the records.                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                               |                    |
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