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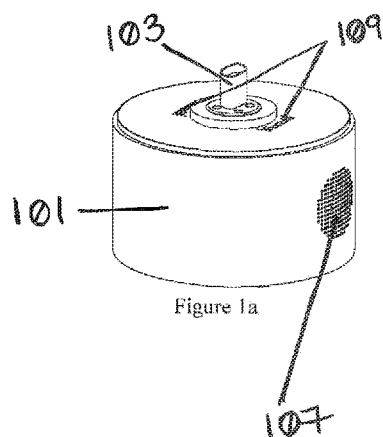
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(54) Title: PORTABLE BIOREACTORS AND PORTABLE BIOREACTOR SYSTEMS FOR ANALYZING BIOFILM FORMATION AND DEGRADATION



(57) Abstract: The present disclosure is directed to portable bioreactors that allow the custom production of microbial cultures, and in some embodiments, the production of custom microbial biofilms. Also disclosed are portable bioreactor systems that are networked and capable of cooperative work in parallel.



INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A01G 7/04; A01G 31/02; A01G 33/00; A01K 63/00; C12M 1/00; C12M 1/34; C12M 3/00 (2019.01)
 CPC - A01G 7/045; A01G 31/02; A01G 33/00; C12M 21/02; C12M 23/44 (2019.08)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 435/257.1; 435/292.1 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2018/0051243 A1 (THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA) 22 February 2018 (22.02.2018) entire document	1, 3-7, 9, 11-13, 15, 17
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Y		2, 8, 10, 14, 16, 18
Y	CN 106774516 A (SHANDONG UNIVERSITY) 31 May 2017 (31.05.2017) entire document; see machine translation	2
Y	"How to Wind and Tie Yarn Skeins," Dummies a Wiley Brand, 30 May 2018 (30.05.2018), Pgs. 1-7. Retrieved from the Internet: < https://www.dummies.com/crafts/knitting/how-to-wind-and-tie-yarn-skeins/ > on 17 December 2019 (17.12.2019). entire document	8
Y	US 2012/0156762 A1 (CSÁNYI et al) 21 June 2012 (21.06.2012) entire document	10
Y	US 2018/0273885 A1 (HOFFMANN-LA ROCHE, INC) 27 September 2018 (27.09.2018) entire document	14
Y	US 2013/0177972 A1 (GREEN et al) 11 July 2013 (11.07.2013) entire document	16, 18

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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