

(12) SOLICITUD INTERNACIONAL PUBLICADA EN VIRTUD DEL TRATADO DE COOPERACIÓN
EN MATERIA DE PATENTES (PCT)

(19) Organización Mundial de la Propiedad
Intelectual
Oficina internacional



(43) Fecha de publicación internacional
6 de Mayo de 2005 (06.05.2005)

PCT

(10) Número de Publicación Internacional
WO 2005/039323 A1

(51) Clasificación Internacional de Patentes⁷: A23L 3/16.
C12M 1/34, 1/38, G05D 23/32

(71) Solicitante (*para todos los Estados designados salvo US*):
UNIVERSIDAD POLITECNICA DE CARTAGENA
[ES/ES]; Ed. "La Milagrosa", Plaza Cronista Isidoro Valverde, s/n, E-30202 Cartagena, Murcia (ES).

(21) Número de la solicitud internacional:

PCT/ES2004/000472

(72) Inventores; e

(22) Fecha de presentación internacional:

28 de Octubre de 2004 (28.10.2004)

(75) Inventores/Solicitantes (*para US solamente*): **PALOP GOMEZ, Alfredo** [ES/ES]; Ed. "La Milagrosa", Plaza Cronista Isidora Valverde, s/n, 30202 Cartagena, Murcia (ES). **MORENO CLARES, José Fermín** [ES/ES]; Ed. "La Milagrosa", Plaza Cronista Isidoro Valverde, s/n, 30202 Cartagena, Murcia (ES). **FERNANDEZ ESCAMEZ, Pablo Salvador** [ES/ES]; Ed. "La Milagrosa", Plaza Cronista Isidoro Valverde, s/n, 30202 Cartagena, Murcia (ES). **ESNOZ NICUESA, Arturo** [ES/ES]; Ed. "La Milagrosa", Plaza Cronista Isidoro Valverde, s/n, 30202 Cartagena, Murcia (ES).

(25) Idioma de presentación:

español

(26) Idioma de publicación:

español

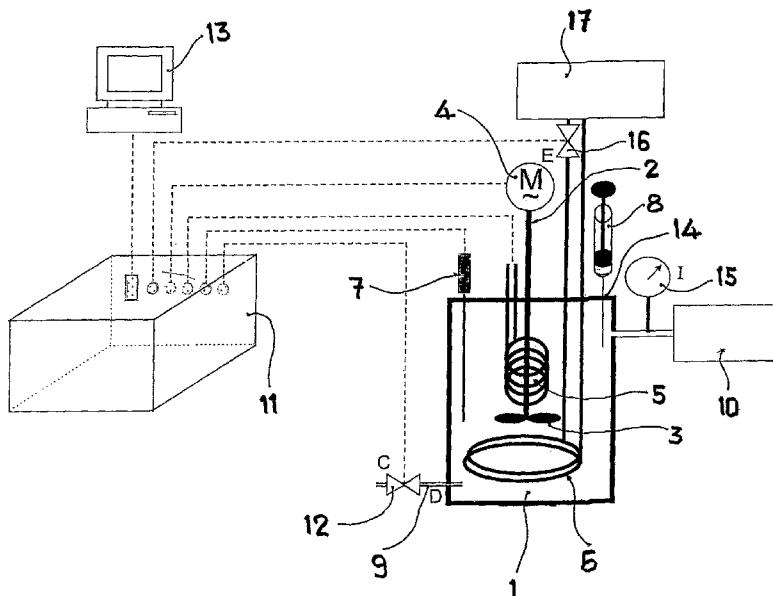
(30) Datos relativos a la prioridad:

P200302529 29 de Octubre de 2003 (29.10.2003) ES

[Continúa en la página siguiente]

(54) Title: THERMORESISTOMETER FOR MEASURING THE RESISTANCE TO HEAT OF MICRO-ORGANISMS IN TEMPERATURE CONTROLLED CONDITIONS AND FOR SIMULATING ISOTHERMAL AND NON-ISOTHERMAL TREATMENT CONDITIONS

(54) Título: THERMORRESISTÓMETRO PARA LA MEDIDA DE LA RESISTENCIA AL CALOR DE MICROORGANISMOS EN CONDICIONES CONTROLADAS DE TEMPERATURA, CAPAZ DE SIMULAR CONDICIONES DE TRATAMIENTO ISOTÉRMICO Y NO ISOTERMO



(57) Abstract: The new thermoresistometer is comprised of a refrigeration serpentine (6) and controls the temperature with a PID unit through a programmable automaton unit (11) and monitors by means a Scada system. In addition to carrying out thermal treatments at constant temperature, the new thermoresistometer can simulate complex heating and cooling ramps and complete thermal treatments, both discontinued and continued and record the evolution of the temperature reached.

[Continúa en la página siguiente]

WO 2005/039323 A1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ ES 2004/000472

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ A23L3/16, C12M1/34, C12M1/38, G05D23/32

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)

IPC⁷ A23L3/16, C12M1/34, C12M1/38, G05D23/32, G01N25/18, G01N27/04, G01N33/483

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

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

CIBEPAT, EPODOC, WPI, PAJ, INTERNET.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ES2004913 A6 (UNIV. ZARAGOZA) 16.02.1989	1
Y	The whole document	2-7
Y	US2002138207 A1 (BRATCHER et al.) 26.09.2002 Abstract. Page 8.	2-7
X	US4212950 A (ADAMS) 15.07.1980 Abstract, columns 1 and 2.	1
Y	Drawing 5	2, 7
Y	US2002156542 A1 (NANDI) 24.10.2002 Abstract, Page 7.	2, 7
X	ES2046944 A (UNIV. ZARAGOZA) 01.02.1994	1
A	The whole document	2
A	US4424559 A (LORINCZ et al.) 3.01.1984	

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

* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance

“E” earlier document but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&” document member of the same patent family

Date of the actual completion of the international search
12 December 2004 (12/12/04)Date of mailing of the international search report
21 December 2004 (21/12/04)Name and mailing address of the ISA/ **S.P.T.O.**
C/Panamá 1, 28071 Madrid, España.
Nº de fax 34 91 3495304.

Facsimile No.

Authorized officer **P. López Sabater**
Telephone No. **34 91 3495385**