PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: H01J 49/04 — A1

(11) International Publication Number: WO 98/09314

(43) International Publication Date: 5 March 1998 (05.03.98)

(21) International Application Number: PCT/GB97/02278

(22) International Filing Date: 26 August 1997 (26.08.97)

(30) Priority Data:
9617852.0 27 August 1996 (27.08.96) GB

(71) Applicant *(for all designated States except US)*: THE MANCHESTER METROPOLITAN UNIVERSITY [GB/GB]; All Saints Building, All Saints, Manchester M15 6BH (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: CLAYDON, Martin, Arthur [GB/GB]; Needham Hall, 206 Palatine Road, Didsbury, Manchester M20 2TU (GB). DAVEY, Simon, Nicholas [GB/GB]; 16 Percival Street, Accrington, Lancs. BB5 0BE (GB). EDWARDS JONES, Valerie [GB/GB]; 24 Albury Drive, Norden, Rochdale, Lancs. QL12 7SX (GB). GORDON, Derek, Boyd [GB/GB]; 12 Knowl Close, Ramsbottom, Bury, Lancs. BL0 9YY (GB).

(74) Agents: EVANS, David, Charles et al.; F.J. Cleveland & Company, 40/43 Chancery Lane, London WC2A 1JQ (GB).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: MICROORGANISM IDENTIFICATION

(57) Abstract

The invention relates to a method and apparatus for characterising microorganisms. The invention uses matrix assisted laser desorption ionisation time of flight mass spectrometry (MALDI-TOF-MS) spectral data for a range of known microorganisms. This spectral data is included in a database for spectral data of each of known microorganisms. A sample of an unidentified microorganism is prepared and then subject to analysis by MALDI-TOF-MS techniques to produce the spectral data of the unknown organism. This data is then compared; using suitable comparison means with the spectral data in the database. Similarity indicates the genus while identity indicates the specific microorganism. The apparatus for this analysis has the advantage that once set up and calibrated, it is relatively simple to use.