

Title (en)  
DEVICE FOR THE MULTIPLICATION AND DETECTION OF NUCLEIC ACIDS

Title (de)  
VORRICHTUNG ZUR VERVIELFÄLTIGUNG UND ZUM NACHWEIS VON NUKLEINSÄUREN

Title (fr)  
DISPOSITIF DE MULTIPLICATION ET D'IDENTIFICATION D'ACIDES NUCLEIQUES

Publication  
**EP 1610899 A2 20060104 (DE)**

Application  
**EP 04725346 A 20040402**

Priority  
• EP 2004003532 W 20040402  
• DE 10315074 A 20030402

Abstract (en)  
[origin: WO2004087951A2] The invention relates to a device for the multiplication and detection of nucleic acids, comprising a temperature controller and/or regulation unit, a reaction chamber, containing a substrate with a detection surface on which a substance library is immobilised and an optical system, by means of which the temporal process of formation of deposit on the detection surface may be detected. The temperature in the reaction chamber may be controlled and/or regulated by means of the temperature controller and/or regulation unit. The invention further relates to a method for the amplification and qualitative and quantitative detection of nucleic acids in a sample, comprising the following steps: a) introduction of the sample into a reaction chamber, formed by a capillary gap between a chamber support and a microarray, whereby the microarray comprises a substrate with nucleic acid probes arranged on array elements thereon, b) amplification of the nucleic acid for detection in the reaction chamber, by means of a cyclical amplification reaction, c) detection of a hybridisation between the nucleic acid for detection and the nucleic acid probes immobilised on the substrate without removal from the reaction chamber of molecules which are not hybridized with the nucleic acids immobilised on the substrate.

IPC 1-7  
**B01L 7/00**; **C12Q 1/68**

IPC 8 full level  
**B01L 7/00** (2006.01); **G01N 21/47** (2006.01); **G01N 21/59** (2006.01); **B01L 3/00** (2006.01)

CPC (source: EP US)  
**B01L 7/52** (2013.01 - EP US); **G01N 21/4738** (2013.01 - EP US); **G01N 21/59** (2013.01 - EP US); **B01L 3/5027** (2013.01 - EP US); **B01L 2200/147** (2013.01 - EP US); **B01L 2300/0636** (2013.01 - EP US); **B01L 2300/0654** (2013.01 - EP US); **B01L 2300/0877** (2013.01 - EP US)

Citation (search report)  
See references of WO 2004087951A2

Citation (examination)  
• EUGEN ERMANTRAUT (CLONDIAG GMBH): "Array based integrated platform for diagnostic genotyping", DECHEMA STATUSSEMINAR CHIPTECHNOLOGIEN, FRANKFURT, 21 January 2002 (2002-01-21), pages 6 - 7, XP002607627  
• POSER ET AL: "Chip elements for fast thermocycling", SENSORS AND ACTUATORS A, ELSEVIER SEQUOIA S.A., LAUSANNE, CH, vol. 62, no. 1-3, 1 July 1997 (1997-07-01), pages 672 - 675, XP022542089, ISSN: 0924-4247, DOI: 10.1016/S0924-4247(97)01542-2

Citation (third parties)  
Third party :  
• WO 2004087951 A2 20041014 - CLONDIAG CHIP TECH GMBH [DE], et al  
• EUGEN ERMANTRAUT: "Array based integrated platform for diagnostic genotyping", CLONDIAG, 21 January 2002 (2002-01-21), pages 6 - 7, XP003025784

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**DE 10315074 A1 20041014**; EP 1610899 A2 20060104; EP 2266699 A1 20101229; EP 2266699 B1 20140604; JP 2006523095 A 20061012; JP 4917883 B2 20120418; US 2006078929 A1 20060413; WO 2004087951 A2 20041014; WO 2004087951 A3 20050127

DOCDB simple family (application)  
**DE 10315074 A 20030402**; EP 04725346 A 20040402; EP 10179369 A 20040402; EP 2004003532 W 20040402; JP 2006504975 A 20040402; US 24167105 A 20050930