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<p>(21) International Application Number: PCT/US94/13400</p> <p>(22) International Filing Date: 23 November 1994 (23.11.94)</p> <p>(30) Priority Data: 08/158,940 29 November 1993 (29.11.93) US</p> <p>(71) Applicant: GEN-PROBE INCORPORATED [US/US]; 9880 Campus Point Drive, San Diego, CA 92121 (US).</p> <p>(72) Inventors: CLARK, Kathleen, A.; 2046 Bruceala Court, Cardiff by the Sea, CA 92007 (US). KACIAN, Daniel, L.; 3911 Tambor Road, San Diego, CA 92124 (US).</p> <p>(74) Agents: HEBER, Sheldon, O. et al.; Lyon & Lyon, First Interstate World Center, Suite 4700, 633 West Fifth Street, Los Angeles, CA 90071-2066 (US).</p>		<p>(81) Designated States: AU, CA, JP, KR.</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 3 August 1995 (03.08.95)</p>
<p>(54) Title: METHOD FOR EXTRACTING NUCLEIC ACIDS FROM A WIDE RANGE OF ORGANISMS</p>		
<p>(57) Abstract</p> <p>Methods for extracting nucleic acids by heating sample cells at about 80-95 degrees C. in a permeabilization reagent containing a non-ionic detergent and a metal chelating agent. The methods of the invention release large fragments of undegraded nucleic acids without physically disrupting the entire cell wall. The nucleic acids are released into solution without bursting the cells and are suitable for research and testing without further purification. The extraction method described herein is rapid, easy to perform, and applicable to a wide variety of cells, including microorganisms. Clinical samples may be screened for the presence or absence of a microorganism by heating the sample at 80-95 degrees Celsius in the presence of a non-ionic detergent and a metal chelating agent, adding to the sample a nucleic acid probe specific to the selected microorganism, incubating the sample under conditions which allow the probe to hybridize to released nucleic acid and detecting whether any hybridized probe is present. A kit for performing the nucleic acid extraction methods disclosed herein is also described.</p>		

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 94/13400

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 C12N1/06 C12N15/10

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)
IPC 6 C12N

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 practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US,A,4 830 969 (THE RESEARCH FOUND. OF STATE UNIVERSITY N.Y.) 16 May 1989 cited in the application See Col. 2, L. 64-col. 3, L. 35, examples 1, 3, 6, 9 and claims	1-7, 10, 12, 15, 17-20, 22, 27, 28
Y	See above	8, 9, 11, 13, 14, 16, 21, 23, 32-45
Y	Data Base WPI Week DW9303, Derwent Publication Ltd London GB: Class B04,D16, AN 93-022712, & JP4349892 See Abstract	1-45
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Patent family members are listed in annex.

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Date of the actual completion of the international search

19 June 1995

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BIOCHEM. BIOPHYS. RES. COMMUN.,, vol. 183,no. 2, 16 March 1992 pages 367-274, H. MEIJER ET AL. 'Recovery and indentification of DNA sequences harboured in preserved ancient human bones' See Materials and Methods and Results ---	1-45
Y	EP,A,0 428 197 (EASTMAN KODAK COMP.) 22 May 1991 See CLAIMS -----	1-45

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-4830969	16-05-89	NONE	
EP-A-428197	22-05-91	US-A- 5231015 CA-A- 2025845 JP-A- 3133379	27-07-93 19-04-91 06-06-91