

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 October 2002 (03.10.2002)

PCT

(10) International Publication Number
WO 02/076203 A3

(51) International Patent Classification⁷: **G01N 1/42**,
A01N 1/00, F25D 17/02, 31/00

(21) International Application Number: PCT/US01/49595

(22) International Filing Date:
28 December 2001 (28.12.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/259,418 2 January 2001 (02.01.2001) US

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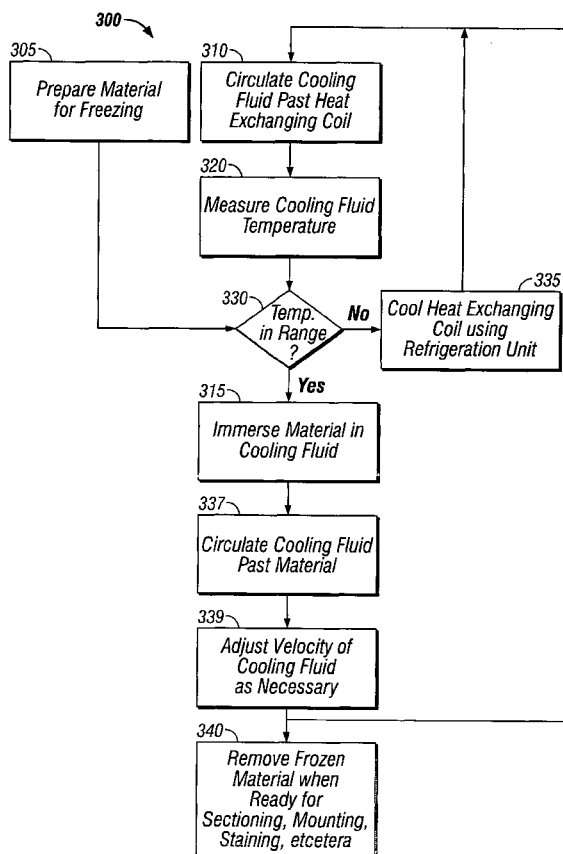
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PREPARING TISSUE SAMPLES FOR HISTOLOGICAL AND PATHOLOGICAL EXAMINATION



(57) Abstract: Viable biological material is cryogenically preserved (cryopreservation) by immersing the material in a tank of cooling fluid, and circulating the cooling fluid past the material at a substantially constant predetermined velocity and temperature to freeze the material. The material may either be directly plunged into the cooling fluid without preparation, or chemically prepared prior to freezing. A method according to the present invention freezes the biologic material quickly enough to avoid the formation of ice crystals within cell structures (vitrification) and allows the samples to maintain anatomical structure and remain biochemically active after thaw. The temperature of the cooling fluid is preferably between -20 degrees centigrade and -30 degrees centigrade, which is warm enough to minimize the formation of stress fractures and other artefacts in cell membranes due to thermal changes.



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*

(88) Date of publication of the international search report:

13 November 2003