

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 April 2006 (06.04.2006)

PCT

(10) International Publication Number
WO 2006/034525 A1

(51) International Patent Classification : **B81B 1/00**,
G01N 1/18, B01L 3/00

(21) International Application Number:
PCT/AU2005/001341

(22) International Filing Date:
2 September 2005 (02.09.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004905578 28 September 2004 (28.09.2004) AU
2004905872 12 October 2004 (12.10.2004) AU
2005901714 7 April 2005 (07.04.2005) AU

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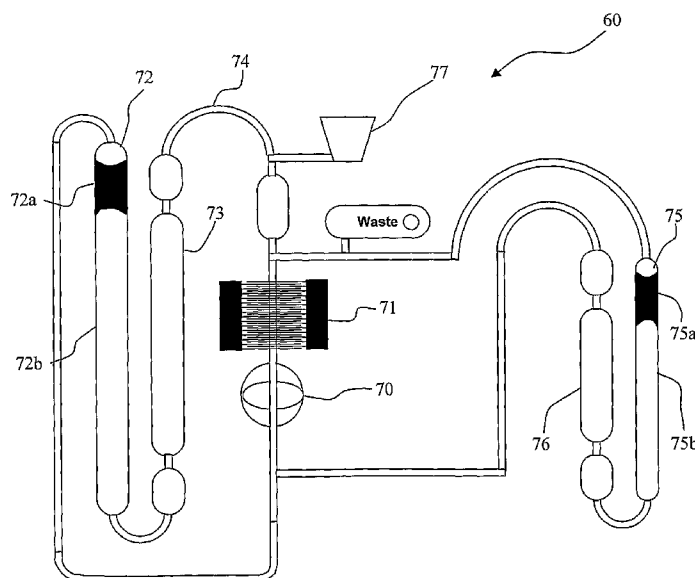
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU,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

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: MICROFLUIDIC DEVICE



(57) Abstract: A closed loop microfluidic device that has at least one microchannel (74) formed in a body and a pump (72) in fluid connection with the microchannel. The pump is actuated by an external motive force to push and pull fluid through the microchannel. A number of chambers (73, 76) are formed in fluid connection with the microchannel to store reagents. The reagents are moved through the microchannel by the pump. A number of active zones (70, 71) are also formed in the microchannel. Various reactions and diagnostics are performed at the active zone. A sample is introduced to the microchannel through a sealable input port (77). The microchannel forms a closed loop with all necessary reagents and diagnostics contained within the closed loop microfluidic device. The sample is processed and analysed completely within the closed loop microfluidic device.

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Published:

— with international search report

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