

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 July 2004 (01.07.2004)

PCT

(10) International Publication Number
WO 2004/055456 A1

- (51) International Patent Classification⁷: **F25D 3/10**, A01N 1/00 (74) Agent: **REINKE, Wayne**; Heslin Rothenberg Farley & Mesiti P.C., 5 Columbia Circle, Albany, NY 12203 (US).
- (21) International Application Number: PCT/US2003/039760 (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, EG, 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, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 12 December 2003 (12.12.2003) (25) Filing Language: English (26) Publication Language: English (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (30) Priority Data: 60/433,357 13 December 2002 (13.12.2002) US
- (71) Applicant (*for all designated States except US*): **INTEGRATED BIOSYSTEMS, INC.** [US/US]; 445 Devlin Road, NAPA, CA 94558 (US).
- (72) Inventors; and (75) Inventors/Applicants (*for US only*): **VOUTE, Nicolas** [FR/FR]; Chemin Peygros, F-13780 Cuges les Pins (FR). **WISNIEWSKI, Richard** [US/US]; 15 White Plains Court, San Mateo, CA 94402 (US). **LEE, Eric** [US/US]; 3 Jay Lane, Acton, MA 01720 (US). **WEBB, Jonathan** [US/US]; * (**).
- Published:**
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- 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.*

(54) Title: SCALED DOWN FREEZING AND THAWING SYSTEM FOR BIOPHARMACEUTICALS AND BIOLOGICS

(57) Abstract: A freezing and thawing unit for small amounts of biopharmaceuticals and biologics. The freezing and thawing unit is reduced in scale, as compared to a corresponding commercial or large-scale process. The freezing and thawing unit can be used for testing, preservation and/or processing of small quantities of biopharmaceuticals and biologics.

WO 2004/055456 A1