



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (21) International Application Number: PCT/US99/14286<br>(22) International Filing Date: 21 June 1999 (21.06.99)<br>(30) Priority Data:<br>09/105,309                      26 June 1998 (26.06.98)                      US<br>(71) Applicant: BIOSTAR, INC. [US/US]; 6655 Lookout Road, Boulder, CO 80301 (US).<br>(72) Inventor: CROSBY, Mark, A.; 6262 Willow Lane, Boulder, CO 80301 (US).<br>(74) Agent: BEUERLE, Stephen, C.; Lyon & Lyon LLP, Suite 4700, 633 West Fifth Street, Los Angeles, CA 90071-2066 (US). |  | (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i><br><i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> |                                                                   |

(54) Title: FILTRATION AND EXTRACTION DEVICE AND METHOD OF USING THE SAME

## (57) Abstract

The present invention involves a simple, disposable, manual filtration and extraction device and method of use that provides a sample directly to an analytical method. The device is capable of providing a clarified liquid ready for analysis or disposal as appropriate for the specific analyte of interest, and is capable of capturing particulate materials and allowing for further extraction of those particles directly with the device. Once extracted, the device will deliver a liquid containing the analyte of interest to an analytical method. The filtration and extraction device includes a pliant body having an open top end and an internal wall defining an inner chamber. A sealing mechanism is adapted to seal the open top end of the body. A gradient filter assembly including at least one filter is supported by a support assembly carried by the body. The pliant body is adapted to be squeezed by a user's fingers so as to impart a positive pressure in the chamber sufficient to cause a fluid in the chamber to flow through the filter assembly.

