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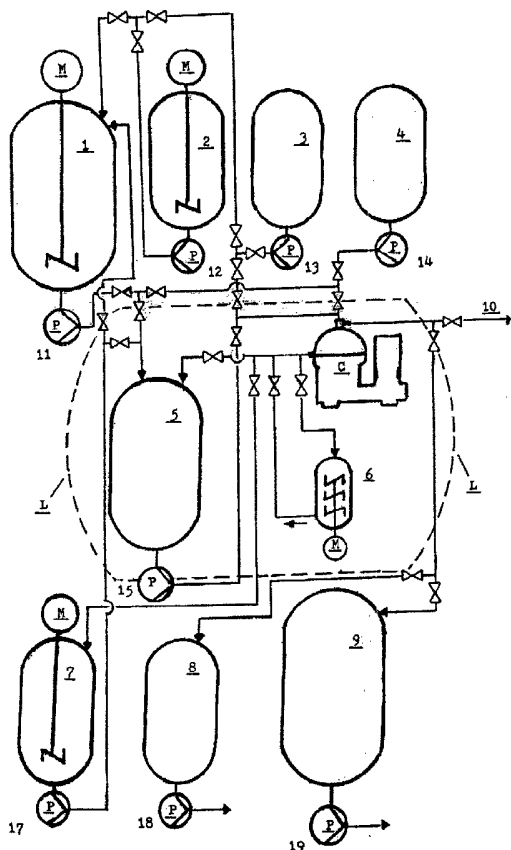
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[Continued on next page]

(54) Title: HIGH-SPEED, SOLID-LIQUID SEPARATION



(57) Abstract: An affinity separation and purification method and apparatus including (a) incubating reconstituted beads with a fluid containing low concentrations of a target compound; (b) introducing the loaded beads into an upstream circulating tank (5), connected with and feeding into a solid-liquid separation system, such as a high speed continuous centrifuge (C), having two additional ports (C2,C3), one (C2) communicating with downstream carrying solutes out of the loop (L) by the supernatant liquid, and the other (C3) communicating with the upstream and returning the concentrate back into the circulating tank (5), thereby effectively keeping the affinity beads within the loop (L); (c) concentrating the suspension of the incubated beads to a minimum volume that remains fluid and pumpable; and (d) diluting the concentrate in the circulating tank (5) with volumes of fresh buffer and continuing the centrifugation, thereby removing unbound, soluble byproducts and impurities in the supernatant.



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B. FIELDS SEARCHED

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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 practicable, 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.
A, P	US 6,315,900 B1 (STIPANOVIC et al) 13 November 2001, col. 2, lines 17-23.	1-9
A	US 4,780,210 A (HSIA et al) 25 October 1988, col. 1, lines 9-15.	1-9
A	US 5,567,615 A (DEGEN et al) 22 October 1996, col. 4, lines 54-58.	1-9



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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