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(54) Title: METHOD TO ASSESS CHROMATOGRAPHIC COLUMN LIFE TIME

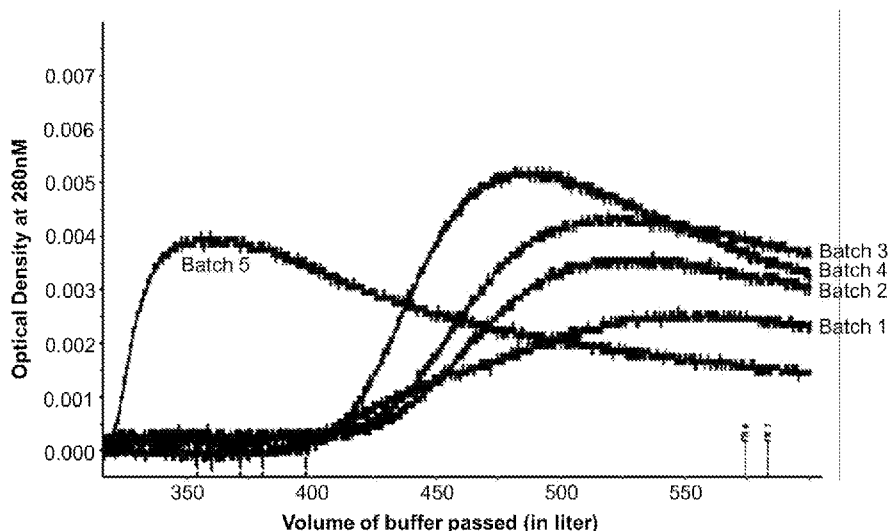


Figure 1

(57) Abstract: The present invention relates to the field of preparative chromatography. The invention provides a rapid method to assess the chromatographic column lifetime during a preparative scale chromatography. The method specifically measures the difference in the column back pressures obtained at two different flow rates, during the cleaning step of a chromatographic process, to assess the re-usability or lifetime of the resin/matrix.



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## INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  
B01D15/08, B01J19/00, B08B3/08 Version=2017.01

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B01J, B01D and B08B

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)

Patseer, IPO Internal Database

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SHILLENN, JAMES K. "VALIDATION PRACTICES FOR BIOTECHNOLOGY PRODUCTS." ASTM, 1996 pg. 81	1-5
X	JOSEPHINE HUI-CHUNG CHENG "PACKING AND QUALITY CONTROL OF A CHROMATOGRAPHY COLUMN" ASIA TECHNOLOGY & TRAINING CENTER MERCK LTD., TAIWAN, 2 OCTOBER 2009 pgs. 12,17-20	1-5
X	JIANG, CANPING, ET AL. "A MECHANISTIC STUDY OF PROTEIN A CHROMATOGRAPHY RESIN LIFETIME." JOURNAL OF CHROMATOGRAPHY A, 1216(31), 2009, pg. 5849-5855 abstract; pg. 1, 2nd column, 2nd para; pg. 5854, 2nd column; table 1	1-5
X	WO 2009094203 A2 (BIOGEN IDEC MA INC.) 30 JULY 2009 (30.07.2009) paras 15-17	1-5
A	STICKEL, JONATHAN J., AND ALEXANDROS FOTOPOULOS. "PRESSUREFLOW RELATIONSHIPS FOR PACKED BEDS OF COMPRESSIBLE CHROMATOGRAPHY MEDIA AT LABORATORY AND PRODUCTION SCALE." BIOTECHNOLOGY PROGRESS 17(4), 2001, PG. 744-751. pg. 744-751. pg. 746,	1-5



Further documents are listed in the continuation of Box C.



See patent family annex.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	2nd column, last para; pg. 747, col. 1 ----- PALL LIFE SCIENCES: Q, S, DEAE, CM CERAMIC HYPERD@ F ION EXCHANGE SORBENTS whole document -----	1-5
A	LARSON, TINA M., ET AL. "USE OF PROCESS DATA TO ASSESS CHROMATOGRAPHIC PERFORMANCE IN PRODUCTIONSCALE PROTEIN PURIFICATION COLUMNS."BIOTECHNOLOGY PROGRESS, 19(2), 2003, pg. 485-492 whole document	1-5

INTERNATIONAL SEARCH REPORT  
Information on patent family members

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Citation	Pub.Date	Family	Pub.Date
WO 2009094203 A2	30-07-2009	EP 2252952 A2	24-11-2010
		CA CA2712732 A1	30-07-2009
		US 2014067308 A1	06-03-2014