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(54) Title: METHOD FOR INCREASING THE COMPRESSIBILITY OF POORLY BINDING POWDER MATERIALS

(57) Abstract: A method is described for the direct compression of particles comprising the steps of subjecting a suspension comprising particles of an active material and a compression excipient in a fluid medium to a pressure force to form a suspension of modified particles, removing said modified particles from said fluid medium to form a dried homogenate; and directly compressing said dried homogenate. The method prepares high active-loaded compression forms by direct compressing a mixture of active material with an excipient composition containing a non-ionic hydrophilic polymer, and a polysaccharide. Also described is a direct compression excipient composition comprising polysaccharide and a non-ionic hydrophilic polymer, which excipient may be combined with an aqueous suspension of the difficult-to-compress active, dried and compressed into a form acceptable for purposes including pharmaceutical applications.

INTERNATIONAL SEARCH REPORT

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	g to International Patent Classification (IPC) or to both national OS SEARCHED	al classification and IPC			
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Documen	ntation searched other than minimum documentation to the ext	ent that such documents are include	d in the field		
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Electronic	data base consulted during the international search (name o	of data base and, where practical, se	earch terms used)		
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Category	MENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, or	of the relevant passages			
			Relevant to claim No.		
Χ	EP 0 130 683 A (MALLINCKRODT	, INC.)	39,40		
	9 January 1985 (1985-01-09) page 12, line 1 -page 13, line	ne 17			
	page 22				
Υ	US 5 560 927 A (MENON ET AL.))	42,43		
	1 October 1996 (1996-10-01) the whole document		72,43		
Υ	WO 93 21008 A (REDDING)		40.40		
	28 October 1993 (1993-10-28)	42,43			
	page 19, line 12 -page 23, li page 27; table 7	ne 17			
	claim 4				
	& US 5 455 342 A 3 October 1995 (1995-10-03)				
j	cited in the application				
		-/			
		,			
X Furth	ner documents are listed in the continuation of box C.	X Patent family memb	ers are listed in annex.		
Special cat	legories of cited documents:	"T" later document published			
A* document defining the general state of the art which is not considered to be of particular relevance		cited to understand the p	after the international filing date n conflict with the application but principle or theory underlying the		
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	an the priority date claimed Ctual completion of the international search	*&* document member of the s			
	April 2002		такона search героп		
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	Tel. (+31-70) 340-2040, Tx. 31 651 epo ni,				

INTERNATIONAL SEARCH REPORT

rational Application No PCT/US 01/16382

Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
•	WO 98 35666 A (NANOSYSTEMS LLC) 20 August 1998 (1998-08-20) page 2, line 1 -page 3, line 27 page 5, line 4 - line 16 page 14, line 1 -page 17, line 19	1,3, 5-10, 12-14	
Y	US 5 510 118 A (BOSCH ET AL.) 23 April 1996 (1996-04-23) the whole document	1,3, 5-10, 12-14	

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

II Jational Application No PCT/US 01/16382

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 130683		09-01-1985	US	4600579 A	15-07-1986
2. 100000	* *		ΑT	37982 T	15-11-1988
			ΑU	576197 B2	18-08-1988
			ΑU	2895784 A	13-12-1984
			CA	1221308 A1	05-05-1987
			DE	3474631 D1	24-11-1988
			EΡ	0130683 A2	09-01-1985
			IN	161763 A1	30-01-1988
			JP	1969719 C	18-09-1995
			JP	6096523 B	30-11-1994
			JP	60011414 A	21-01-1985
			ZA	8403800 A	24-12-1984
US 5560927	 А	01-10-1996	 AU	5988996 A	26-02-1997
			EP	0861069 A1	02-09-1998
			JP	11510158 T	07-09-1999
			WO	9704751 A1	13-02-1997
WO 9321008	 А	28-10-1993	 AU	4109493 A	18-11-1993
			WO	9321008 A1	28-10-1993
			US	5455342 A	03-10-1995
WO 9835666	 А	20-08-1998		9835666 A1	20-08-1998
nc 5005000	••	_0 00 1000	ÜS	6068858 A	30-05-2000
			ÜS	6221400 B1	24-04-2001
			US	6045829 A	04-04-2000
US 5510118	 А	23-04-1996	 AU	4867396 A	04-09-1996
55 5515115	,,		WO	9625152 A1	22-08-1996