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Padi et al.

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(54) PROCESSES FOR THE PREPARATION OF SITAGLIPTIN AND PHARMACEUTICALLY ACCEPTABLE SALTS THEREOF

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U.S.C. 154(b) by 40 days.

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(30) Foreign Application Priority Data

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May 14, 2008	(IN)	1188/CHE/2008

(51) **Int. Cl.** (2006.01)

(52) U.S. Cl. 544/350

(56) References Cited

U.S. PATENT DOCUMENTS

6,699,871	В2	3/2004	Edmondson et al.
7,265,128	B2	9/2007	Ashton et al.
7,326,708		2/2008	Cypes et al.
2005/0032804	A1		Cypes et al.
2006/0194977	A1	8/2006	Xiao et al.
2006/0287528	A1	12/2006	Wenslow et al.
2007/0021430	A1	1/2007	Chen et al.
2009/0247532	A1	10/2009	Huang et al.

FOREIGN PATENT DOCUMENTS

WO	2004/085378 A1	10/2004
WO	2004/085661 A2	10/2004
WO	2004/087650 A2	10/2004
WO	2005/020920 A2	3/2005
WO	2005/030127 A2	4/2005
WO	2005/072530 A1	8/2005
WO	2006/033848 A1	3/2006
WO	2007/035198 A2	3/2007

OTHER PUBLICATIONS

David J. Ager, "Novel Chiral Chemistries Japan 2007", Platinum Metals Review, vol. 51, No. 4, pp. 172-175, 2007.

Primary Examiner — Douglas M Willis

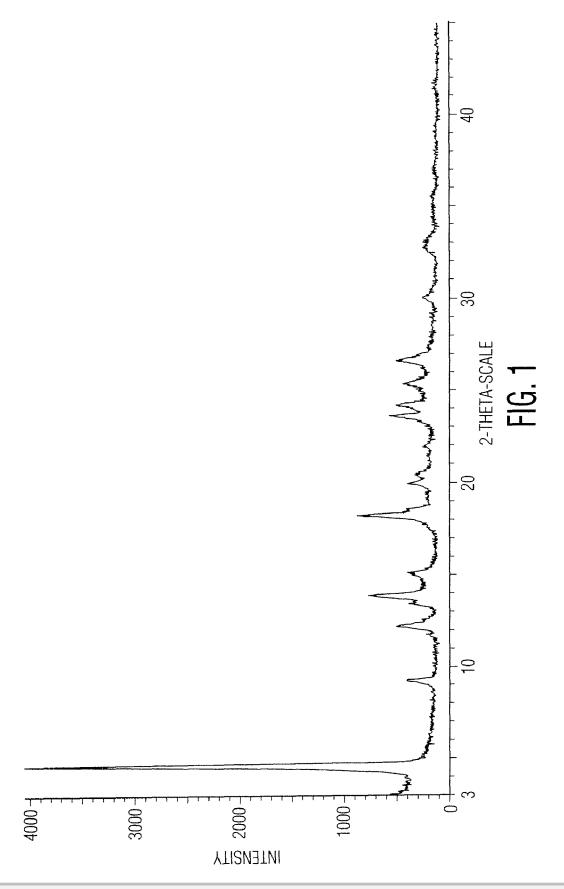
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(57) ABSTRACT

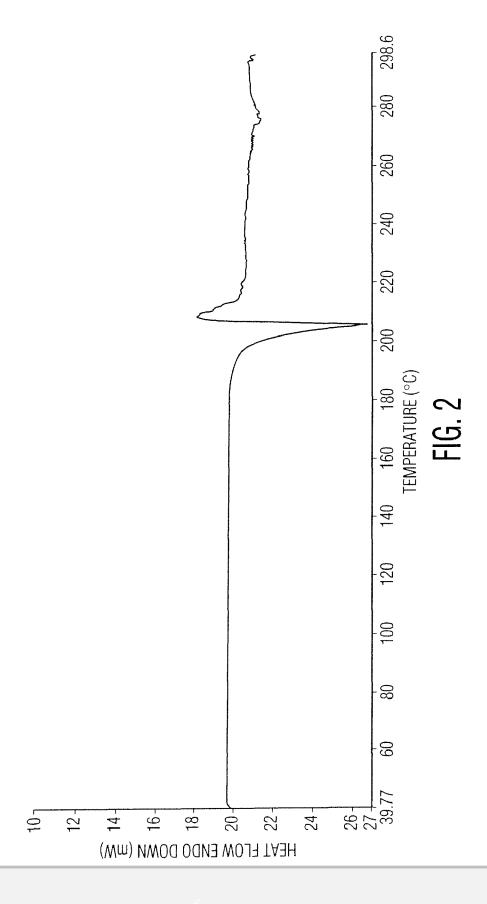
There is provided an improved process for the preparation of Sitagliptin of Formula II by reduction of compound of Formula VIII to Formula IX followed by deprotection of Formula IX to afford Sitagliptin of Formula II.

6 Claims, 33 Drawing Sheets

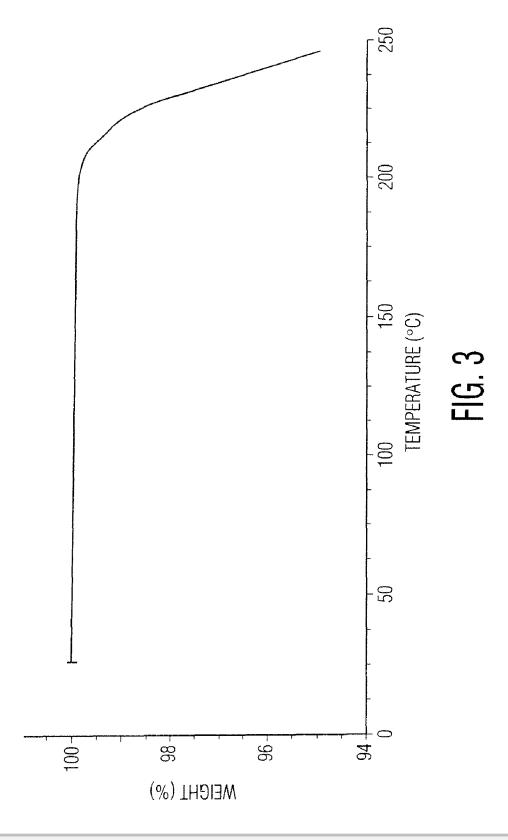


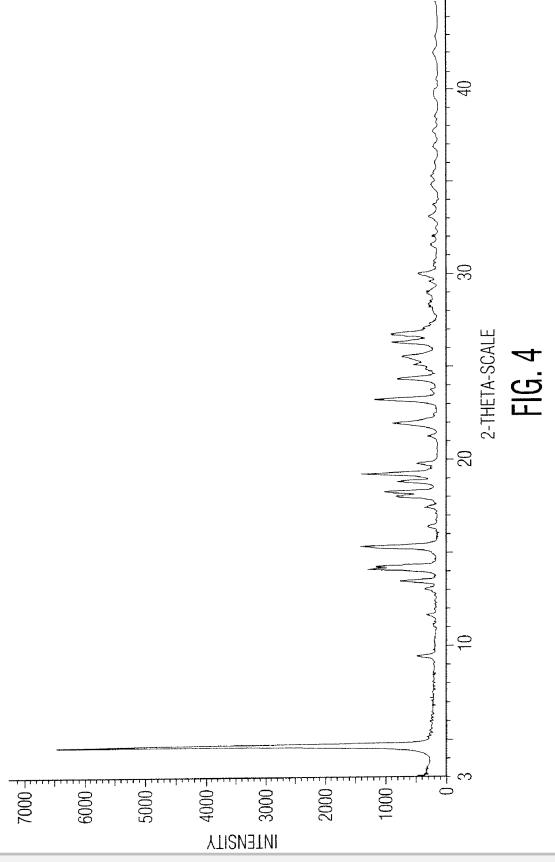












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