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# (54) SOLID STATE FORMS OF SITAGLIPTIN SALTS

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(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

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#### Related U.S. Application Data

(60) Provisional application No. 61/164,563, filed on Mar. 30, 2009, provisional application No. 61/170,697, filed on Apr. 20, 2009, provisional application No. 61/174,073, filed on Apr. 30, 2009, provisional application No. 61/182,772, filed on Jun. 1, 2009, provisional application No. 61/186,031, filed on Jun. 11, 2009, provisional application No. 61/302,626, filed on Feb. 9, 2010, provisional application No. 61/304,615, filed on Feb. 15, 2010, provisional application No. 61/309,024, filed on Mar. 1, 2010, provisional application No. 61/312,376, filed on Mar. 10, 2010, provisional application No. 61/315,149, filed on Mar. 18, 2010.

(51) **Int. Cl.**A61K 31/495 (2006.01)

(52) **U.S. Cl.** ...... 514/249; 544/350

See application file for complete search history.

## EODEICNI DATENIT DOCUMENTI

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#### (57) ABSTRACT

Solid state forms of Sitagliptin salts (e.g. Sitagliptin sulfate, Formula I), processes for preparing the solid state forms, and pharmaceutical compositions thereof, are provided. These compounds are of a class of dipeptidyl peptidase IV enzyme inhibitors which are useful, for example, for the manufacture of a medicament for the treatment of type 2 diabetes mellitus.

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10 Claims, 70 Drawing Sheets



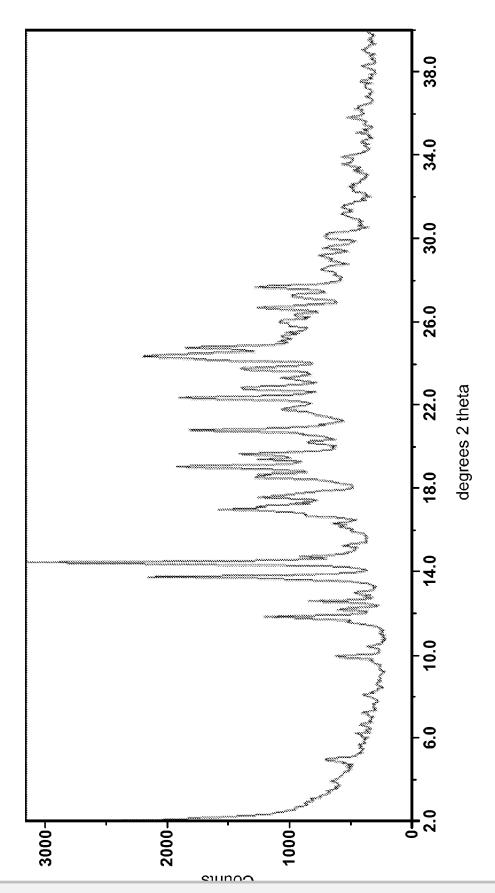
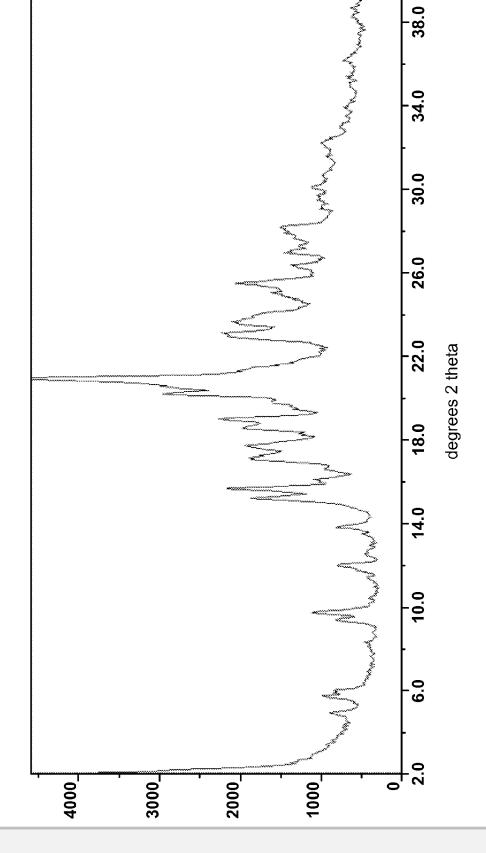
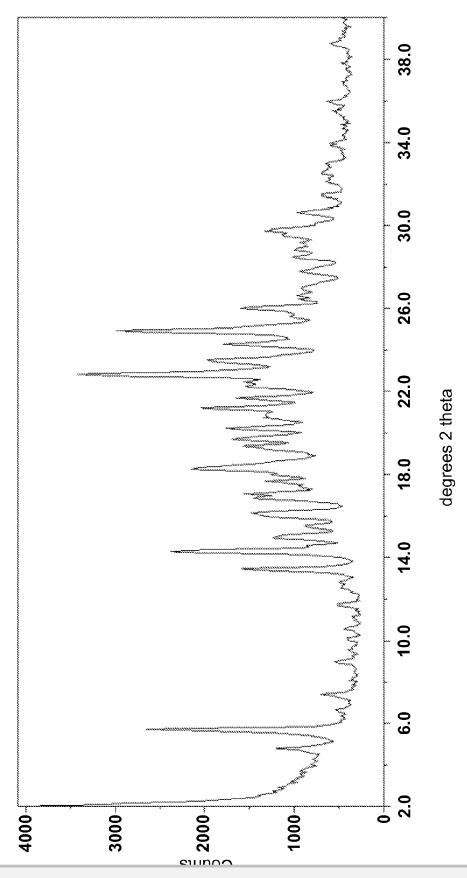


FIG. 1a

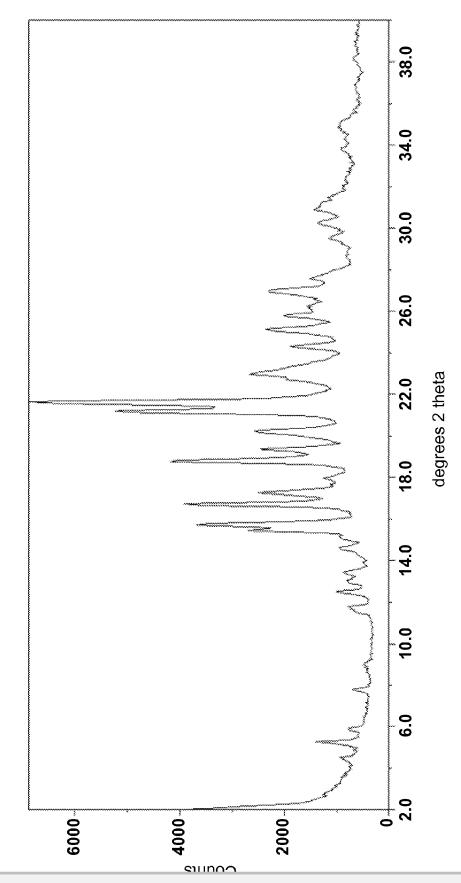
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