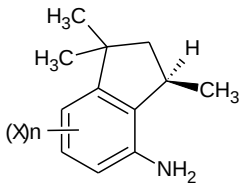
CLAIMS

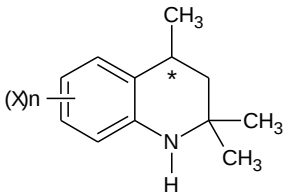
1. A process for preparing a 1,1,3-trimethylindan-4-amine of formula (I), or a salt thereof, enriched in its *(R)*-enantiomer:



(I)

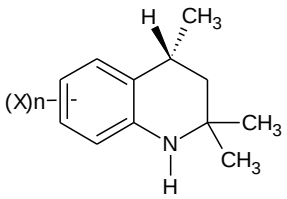
comprising the following steps:

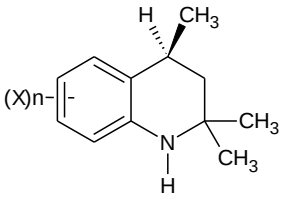
a) treating a racemic mixture of an optionally substituted 2,2,4-trimethyl-1,2,3,4-tetrahydroquinoline compound of formula (IIIa)



(IIIa)

comprising an *(R)*-enantiomer of formula (IVa) and an *(S)*-enantiomer of formula (Va)



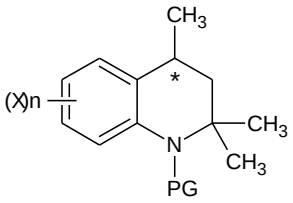


(IVa) (Va),

according to an operating sequence A or an operating sequence B,

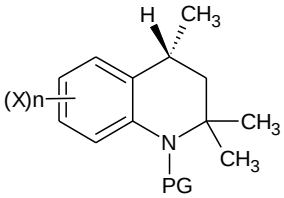
the operating sequence A comprising:

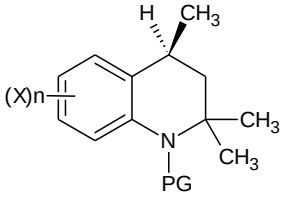
b1) converting by a protection reaction the racemic mixture of the compound of formula (IIIa) into a racemic mixture of a compound of formula (IIIb) having a protective PG group attached to the nitrogen atom



(IIIb),

the racemic mixture of the compound of formula (IIIb) comprising an *(R)*-enantiomer of formula (IVb) and an *(S)*-enantiomer of formula (Vb)





(IVb) (Vb),

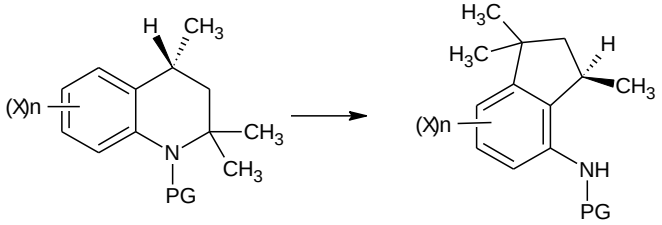
b2) separating the *(R)*-enantiomer of formula (IVb) from the *(S)*-enantiomer of formula (Vb);

the operating sequence B comprising:

b3) separating the *(R)*-enantiomer of formula (IVa) from the *(S)*-enantiomer of formula (Va);

b4) converting by a protection reaction the *(R)*-enantiomer of formula (IVa) into the *(R)*-enantiomer of formula (IVb);

c) subjecting the *(R)*-enantiomer of formula (IVb) obtained in step b2 or in step b4 to an acid rearrangement reaction to form a compound of formula (VI)



(IVb) (VI)

d) substituting the PG group of the compound of formula (VI) with a hydrogen atom to obtain the *(R)*-enantiomer of the compound of formula (I);

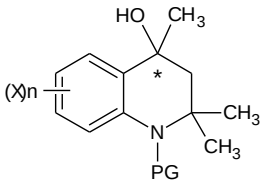
wherein, in the formulas:

- * indicates an asymmetric carbon atom;

- X is a fluorine atom;
- n is 1;
- PG is a -COR^1 group or a -$COOR^2$ group,
- R^1 is methyl; and
- R^2 is methyl or a benzyl group.

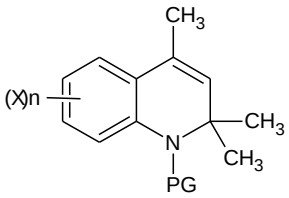
2. The process of claim 1, which further comprising the following steps in sequence:

i) oxidizing, by means of an oxidizing agent, the *(S)*-enantiomer of formula (Vb) obtained in step b2 to form a compound of formula (VII)



(VII);

ii) dehydrating the compound of formula (VII) in an acid environment to obtain a compound of formula (VIII)



(VIII);

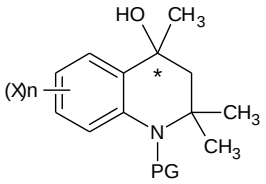
iii) hydrogenating the compound of formula (VIII) to obtain the racemic mixture of the compound of formula (IIIb) comprising the *(R)*-enantiomer of formula (IVb) and the *(S)*-enantiomer of formula (Vb); and

iv) feeding the racemic mixture of the compound of formula (IIIb) obtained in said step iii back into step b2 of claim 1.

3. The process of claim 1, further comprising the following steps in sequence:

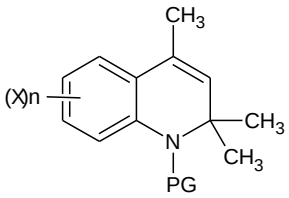
converting by a protection reaction the *(S)*-enantiomer of formula (Va) obtained in step b3 into the *(S)*-enantiomer of formula (Vb);

i) oxidizing, by means of an oxidizing agent, the *(S)*-enantiomer of formula (Vb) to the compound of formula (VII)



(VII);

ii) dehydrating the compound of formula (VII) in an acid environment to obtain a compound of formula (VIII)



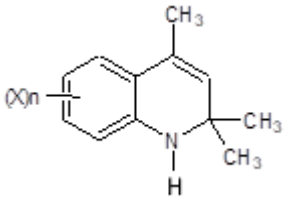
(VIII);

iii) hydrogenating the compound of formula (VIII) to obtain the racemic mixture of the compound of formula (IIIb) containing the *(R)*-enantiomer of formula (IVb) and the *(S)*-enantiomer of formula (Vb); and

iv) feeding the racemic mixture of the compound of formula (IIIb) obtained in said step iii back into step b2 of claim 1.

4. The process of claim 2, wherein said step iii and step iv are replaced by the following steps in sequence:

ii-bis) converting by a deprotection reaction the compound of formula (VIII) to obtain a compound of formula (IX)



(IX);

iii-bis) hydrogenating the compound of formula (IX) to obtain the racemic mixture of the compound of formula (IIIa) containing the *(R)*-enantiomer of formula (IVa) and the *(S)*-enantiomer of formula (Va); and

iv-bis) feeding the racemic mixture of the compound of formula (IIIa) obtained in said step iii-bis back into said step a of claim 1.

5. The process of any one of the preceding claims, wherein said step d for substituting the PG group with a hydrogen atom is carried out by hydrolysis or catalytic hydrogenation.

6. The process of any one of the preceding claims, wherein said step b2 or said separation step b3 is carried out by means of a chiral column chromatographic technique.

7. The process of claim 1, wherein said separation step b3 of the racemic mixture of the compound of formula (IIIa) comprises the following steps:

reacting the racemic mixture of formula (IIIa) with an optically active acid to obtain a mixture of a corresponding *(R)*-enantiomeric salt and a corresponding *(S)*-enantiomeric salt;

separating the corresponding *(R)*-enantiomeric salt from the corresponding *(S)*-enantiomeric salt; and

subjecting the *(R)*-enantiomeric salt to basic hydrolysis to obtain the *(R)*-enantiomer of formula (IVa) to be fed to said step b4.

8. The process of any one of the preceding claims, wherein the *(R)*-enantiomer of formula (IVb) which is subjected to the acid rearrangement step c has an enantiomeric excess (ee%) with respect to the *(S)*-enantiomer of formula (Vb) greater than 90%, preferably greater than 98%, more preferably greater than 99.5%.

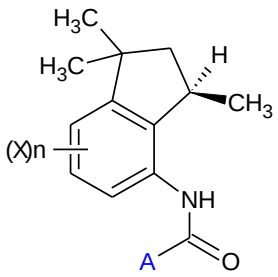
9. The process of any one of the preceding claims, wherein the acid rearrangement reaction comprises reacting the *(R)*-enantiomer of formula (IVb) in the presence of an inorganic acid, preferably selected from sulfuric acid and orthophosphoric acid.

10. The process of any one of the preceding claims, wherein the compound of formula (I) obtained from said step d has an enantiomeric excess (ee%) of the *(R)*-enantiomer with respect to the *(S)*-enantiomer greater than 97%, greater than 99%, more preferably greater than 99.5%.

11. The process of any one of the preceding claims, wherein in the compound of formula (IIIa) or (IIIb):

- X is a fluorine atom;
- n is 1;
- PG is an acetyl group or a carbobenzyloxy group.

12. A process for the preparation of an amide of formula (II), enriched in its *(R)*-enantiomer,



(II)

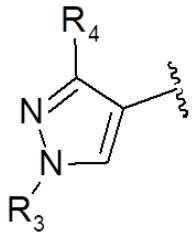
comprising the following steps:

preparing a compound 1,1,3-trimethylindan-4-amine of formula (I), or a salt thereof, enriched in the *(R)*-enantiomer prepared according to the process of any one of the preceding claims;

condensing said compound of formula (I) with at least one compound of formula AC(O)Y

wherein:

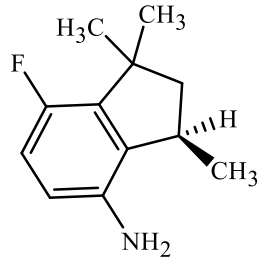
- A is



A_1;

- R_3 is methyl;
- R_4 is difluoromethyl;
- Y is a hydroxyl group or a halogen atom.

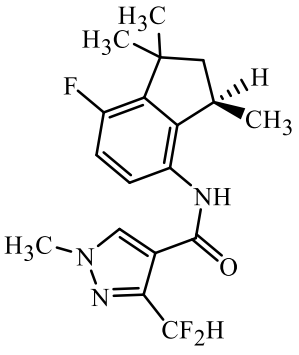
13. The process of any one of the preceding claims, wherein the compound of formula (I) is:



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14. The process of claim 11, wherein PG is an acetyl group.

15. The process of claim 12, wherein the compound of formula (II) is:



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