Claims

1. Process for preparing methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I), characterized in that 2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-5-[(E)-phenyldiazenyl]-pyrimidine-4,6-diamine of the formula (III) is cleaved by catalytic hydrogenation and in that 2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-4,5,6-pyrimidinetriamine of the formula (VIII) is isolated without intermediate formation of salts.

2. Process for preparing methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I), characterized in that 2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-4,5,6-pyrimidinetriamine of the formula (VIII) is reacted with

   a) methyl chloroformate of the formula (V) or

   b) dimethyl dicarbonate of the formula (X)

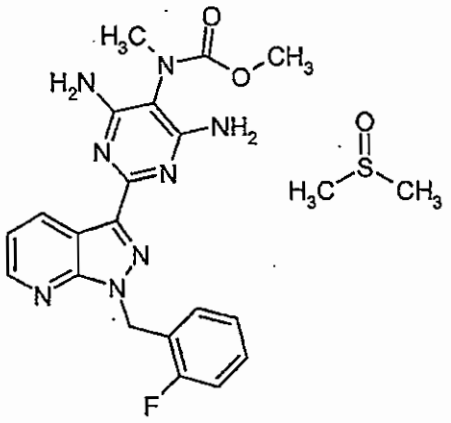
   to give methyl 4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-5-pyrimidinylcarbamate of the formula (VI) via a pyridine-free reaction route.

3. Process according to Claim 1 or 2, characterized in that methyl 4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-5-pyrimidinylcarbamate of the formula (VI) is reacted with a methylating agent to give methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I).

4. Process for purifying methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I), characterized in that the crude product of the compound of the formula (I) is dissolved in dimethyl sulphoxide and the resulting methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate sulphinyldimethane of the formula (II)

5. is isolated and the dimethyl sulphoxide is subsequently removed again by boiling in a pharmaceutically acceptable solvent.

6. Methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate sulphinyldimethane of the formula



(III).

7. Methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I), obtainable by the process and/or the purification according to any of Claims 1 to 4.

8. Use of methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate of the formula (I), obtainable by the process and/or the purification according to any of Claims 1 to 4, for preparing a medicament for the treatment of cardiovascular disorders and erectile dysfunction.

CLAIMS

1. A process for purifying methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimid- in-5-yl}methylcarbamate, characterized in that the crude methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimid- in-5-yl}methylcarbamate is dissolved in dimethyl sulphoxide and the resulting methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimid- in-5-yl}methylcarbamate sulphinyldimethane is isolated and the dimethyl sulphoxide is removed by boiling in a pharmaceutically acceptable solvent.

2. The compound methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimid- in-5-yl}methylcarbamate sulphinyldimethane of the formula

(II)

