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**(54) METHOD FOR PREPARING 24-EPIBRASSINOLIDE**

(57) Abstract:

FIELD: organic chemistry of steroids, chemical technology.

SUBSTANCE: invention relates to the improved method for preparing chemical compounds of steroid order, namely, to a method for preparing epibrassinolide representing

(22R,23R,24R)-2  $\alpha$ ,3 $\alpha$ ,22,23-tetrahydroxy-B-homo-7-oxa-5 $\alpha$ -ergostane-6-one and relating to biologically active substance - a phytostimulator regulating growth of plants. Method involves the successive carrying out the following stages: a) synthesis of ergosterol mesylate by treatment of ergosterol with methanesulfochloride in pyridine; b) synthesis of isoergosterol by boiling ergosterol mesylate in aqueous acetone in the presence of potassium (sodium) hydrocarbonate; c) synthesis of isoergosterone by oxidation of isoergosterol with chrome anhydride in pyridine; d) synthesis of 7,8-dihydroergosterol by reduction of isoergosterone with sodium dithionite in the presence of a solubilizing medium containing cationic, anionic or nonionic

surface-active substances of the following order:  $C_nH_{2n+1}X$  wherein  $n = 9-18$ ; X means  $-NMe_3$ ,  $-NEt_3$ ,  $-COOH$ ,  $-SO_3H$ ,  $-OSO_2M$ ,  $-OP(O)(OM)_2$  wherein M means alkaline metal, polyethylene glycol,  $(C_2-C_6)$ -aliphatic alcohols or monoesters of ethylene glycol or diethylene glycol as a co-solubilizing agent, electrolyte and water taken in the molar ratio = 1:(5-6):(100-250), respectively; e) steroid rearrangement of 7,8-dihydroisoergosterol; f) formation of 24-epicastasterone by treatment of (22E,24R)-5  $\alpha$ -ergosta-2,22-diene-6-one with methanesulfoneamide and potassium carbonate with using catalytic amounts of potassium ferricyanide (III) and osmium tetroxide; g) dissolving 24-epicastasterone formed in chloroform followed by treatment with trifluoroacetic acid forming in mixing trifluoroacetic anhydride and hydrogen peroxide in chlorinated organic solvent, and isolation of the end product of the formula (I) with high yield.

EFFECT: improved preparing method.

2 cl, 7 ex