

The invention relates to the preparation of estetrol of formula (I), derivatives thereof protected at positions 3,15 α ,16 α ,17 β of general formula (III), and 3-hydroxy derivatives thereof protected at positions 15 α ,16 α ,17 β of general formula (IV), and to the intermediates of general formulae (III) and (IV) applied in the process. Another aspect of the invention is the use of estetrol of formula (I) obtained by the process of the invention for the preparation of a pharmaceutical composition.

