

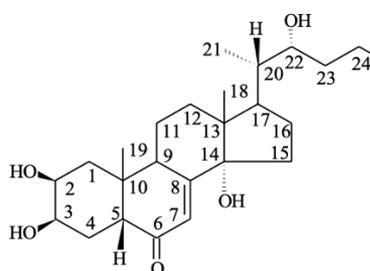
PP 64. ASPECTS OF PHYTOECDYSTEROIDS

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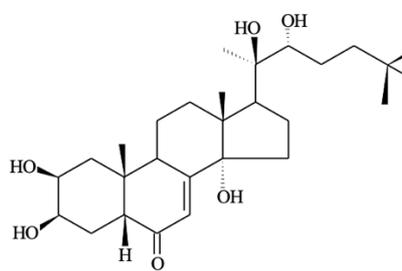
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Ecdysteroids are one of the most widespread steroid compounds in nature. They were found in more than 90% of the species of the animals world, named after arthropods, the number of species of which reaches 1 million, as well as in some other invertebrates. Assessing the role of ecdysteroids, as ecdysone (1) and 20-hydroxyecdysone (2) in the vital activity of plants, one should bear in mind the close ecological interconnection and interdependence between the world of plants and insects.



α -ecdysone (1)



20-hydroxyecdysone (2)

Unlike plants, most invertebrates do not have an enzyme apparatus for the complete synthesis of steroids. Ecdysteroids in both the animal and the plants world, as it is now established, play an extremely important role in the regulation of vital processes in their organisms, despite the fact that they are far from each other in evolutionary terms. In recent years, in the field of chemistry and pharmacology of plant steroids, most of the work is devoted specifically to phytoecdysteroids, as the most original and promising group of compounds with metabolic activity. Further, in our research Institute have been characterized a lot of various phytoecdysteroids, which isolated and applied in the industry as Ecdysten, Ecdysilen, Ajustan and etc. Alternatively, currently these work continued by another researchers regardless Institute of the chemistry of Plant substances. Various phytoecdysteroids have been determined from endemic plants. For instance, *Rhaponticum carthamoides*, *Ajuga turkestanica*, *Siline viridiflora* and etc.