

论文

国药中黄酮类之研究(VII)黄芩化学成分的研究(第二报)黄芩素中葡萄糖醛酸位置的确定

曾广方;张赞容

中国科学院药物研究所

摘要:

关键词:

STUDIES ON THE FLAVONOIDS IN CHINESE DRUGS,(VII)THE CHEMICAL COMPOSITION OF HUANG-CHI N(SCUTELLARIA BAICALENSIS GEORG.), II .THE POSITION OF GLUCURONIC ACID LINKING IN BAICALIN

TSENG KWONG-FONGAND CHANG TS'AN-YUNG

Abstract:

The extraction of baicalin and the preparation of its new methylated compounds have been reported in our previous paper. In the present work, we intend to ascertain the position of glucuronic acid which links in baicalin, as it has never been solved since its discovery. Shibata et al believed that the glucuronic acid linked at 6-position because it could not be oxidized by chloropentamminecobaltchloride. During studying the colour test of primetin, Shibata and Hattori found, however, that baicalin could react with cobaltpentaminechloride salt, which was considered to be a specific test for the vicinal hydroxy groups in phenolic compounds. They based the only fact that they obtained a similar phenomenon with primetin, and assumed that it must be linked at 7-position. This assumption of the structure of primetin as 5, 6-dihydroxyflavone was disproved afterwards. Wilson Baker found 5-hydroxy-8- methoxyflavone identical with prtmetin monomethyl ether, and simultaneously Zeniti Horii succeeded in synthesizing primetin, so that its structure was proved to be 5, 8- dihydroxyflavone. A further confirmation on the position of the linkage has been obtained by the authors during the ring fission, a colourless substance in needles, m.p. 186°C, as well as benzoic acid and acetic acid were obtained on the treatment of baicalin monomethyl ether with potassium hydroxide. The needles exhibit a violet red colouration with HCl-vanillin test, as phloroglucinol does. It is confirmed to be III, iretol (1, 3, 5-trihydroxy-4-methoxybenzene), and no melting point depression was observed on admixture with an authentic sample, which was prepared as a fission product from wogonin (5,7-dihydroxy-8- methoxyflavone). We have, therefore, confirmed the 7-position linkage of glucuronic acid in baicalin with reasonable certainty.

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