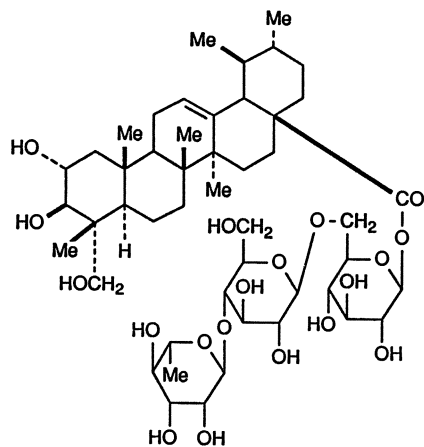


36.1 Introduction

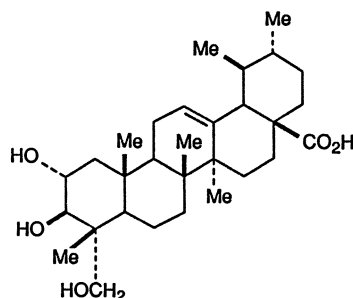
Jixuecao, Herba Centellae, is the dry whole plant of *Centella asiatica* (L.) Urb. (Apiaceae) collected in summer and fall. It is listed officially in the Chinese Pharmacopoeia and used as an antipyretic, diuretic, and antidote in the treatment of icterus, heatstroke, diarrhea, ulcerations, eczema, and traumatic diseases.

36.2 Chemical Constituents

From the whole plant of *C. asiatica* several triterpene saponins and sapogenins were isolated. The major triterpene saponin is asiaticoside (36-1) [1, 2] with the sapogenin asiatic acid (36-2), a trihydroxyursenoic acid derivative. The structures of asiaticoside [1] and its aglycon [3] were elucidated by chemical and spectral methods. Thus, asiaticoside is a triglycoside of asiatic acid with one mannose and two glucose residues.



Asiaticoside (36-1)



Asiatic acid (36-2)

From the whole plant of *C. asiatica*, collected in Madagascar, the triterpenes madasiatic acid (36-3) [4] and madecassic acid (36-4) [5] were isolated and structurally investigated. The latter was also isolated from *C. asiatica* collected in India and named brahmnic acid [6]. A related saponin, madecassoside (36-5), with the aglycon madecassic acid was also isolated from *C. asiatica* collected in China [7]. All these triterpenes are derived from ursenoic acid (36-6) and have ursane (23-17) skeleton.