Akebia quinata (Thunb.) Decne.

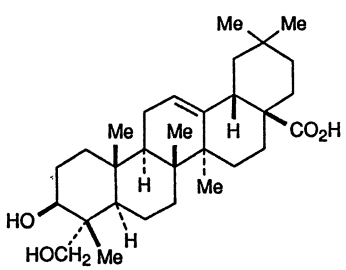
7

7.1 Introduction

Yuzhizi, Fructus Akebiae, is the dry ripe fruits of *Akebia quinata* (Thunb.) Decne., *A. trifoliata* (Thunb.) Koidz., or *A. trifoliata* (Thunb.) Koidz. var. *australis* (Diels) Rehd. (Lardizabalaceae) collected in summer and fall when the fruits have yellowed. It is listed officially in the Chinese Pharmacopoeia and is used in Chinese traditional medicine as an analgesic, antiphlogistic, and diuretic.

7.2 Chemical Constituents

A. quinata is rich in triterpene saponins that are present not only in fruits and seeds, but also in stems. A number of triterpene saponins have been isolated, mainly, with hederagenin (*7-1*) as the sapogenin, but also some with oleanolic acid as the aglycon. Thus, from the seeds of *A. quinata*, saponins A–G [1, 2]; from the stems, saponins referred to as akeboside St_{b-f}, St_h, St_j, and St_k [3, 4]; from the fresh pericarps, pericarp saponins A–H, J1–J3, and K [5]; and arjunolic acid, norarjunolic acid, and their glycosides [6] were isolated. The structures of saponins A–G (*7-2–7-8*); akebosides St_h (*7-9*), St_j (*7-10*), and St_k (*7-11*); pericarp saponins A, B–G (*7-12–7-16*), J1 (*7-17*), and J2 (*7-18*), and arjunolic acid (*7-19*), norarjunolic acid (*7-20*), and their glycosides (*7-21, 7-22*) were elucidated. Among them saponin A and pericarp saponin A; saponin C and pericarp saponin F; and akeboside St_h and pericarp saponin K were identical. Akeboside St_j and pericarp saponins B and E have an oleanolic acid aglycon, whereas the other saponins all have hederagenin as the sapogenin. The saponins are listed in Table *7-1*.



Hederagenin (*7-1*)