

17.1 Introduction

Angelica is a plant genus often used in traditional Chinese medicine. Officially listed in the Chinese Pharmacopoeia are three items:

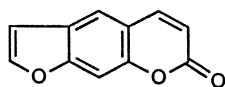
- Baizi, Radix Angelicae dahuricae, is the dry root of *Angelica dahurica* (Fisch. ex Hoffm.) Benth. et Hook f. or *A. dahurica* var. *formosana* (Boiss.) Shan et Yuan (Apiaceae) collected between summer and fall when the leaves have turned yellow. It is used as an antipyretic and analgesic for cold, headache, and toothache.
- Danggui, Radix Angelicae sinensis, is the dry root of *A. sinensis* (Oliv.) Diels collected in late summer. It has been used as an analgesic in treatment of menstrual disorders, menorrhagia, and rheumatism.
- Duhuo, Radix Angelicae pubescentis, is the dry root of *A. pubescens* Maxim. f. *biserrata* Shan et Yuan collected in late fall or early spring. It has been used as an analgesic and antirheumatic agent.

17.2 Chemical Constituents

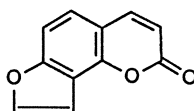
17.2.1 Chemical Constituents of *Angelica dahurica* and *Angelica dahurica* var. *formosana*

The roots of *A. dahurica* and *A. dahurica* var. *formosana* are known to contain a number of coumarin and furocoumarin derivatives, listed in Table 17-1. The furocoumarin byakangelicin (17-13) was also isolated from the fruits of *A. dahurica* var. *formosana*.

Among the furocoumarins, furo[3,2-g][1] benzopyran-7-one is known as psoralen (17-1) and furo[2,3-h]-1-benzopyran-2-one as angelicin (17-2).



Psoralen (17-1)



Angelicin (17-2)