

79.1 Introduction

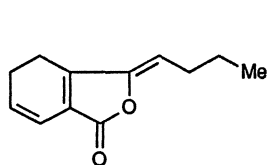
Some plants of the genus *Ligusticum* are used as herbal medicines in China. Two items including three *Ligusticum* species are listed in the Chinese Pharmacopoeia:

Chuanxiong, Rhizoma Chuanxiong, is the dry rootstock of *Ligusticum chuanxiong* Hort. (Apiaceae), which is collected in summer. It is used as an analgesic agent in the treatment of rheumatic and traumatic diseases and against menstrual disorder.

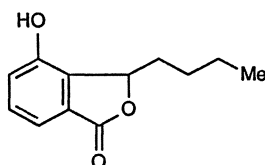
Gaoben, Rhizoma Ligustici, is the dry root and rootstock of *L. sinensis* Oliv. or *L. jeholense* Nakai et Kitag., which is collected in the fall, when the aboveground part of the plant has withered, or in spring, when the seedlings have grown. It may be used as an analgesic in the treatment of cold, headache, and rheumatic pains.

79.2 Chemical Constituents

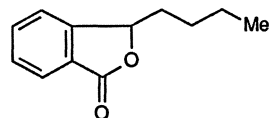
The rhizome of *L. chuanxiong* is known to contain phthalides, alkaloids, acids, esters, and neutral substances [1]. A number of phthalides were isolated and identified from the rhizome of *L. chuanxiong*: ligustilide (79-1) [2], chuanxingol (79-2) [3], butylphthalide (79-3), butylidene phthalide (79-4), senkyunolide (79-5), neocnidilide (79-6) [4], 3-butyl-3-hydroxy-4,5,6,7-tetrahydro-6,7-dihydroxyphthalide (79-7) [5], and ligustilidiol (79-8) [6].



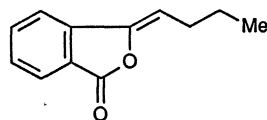
Ligustilide (79-1)



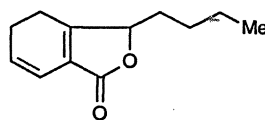
Chuanxingol (79-2)



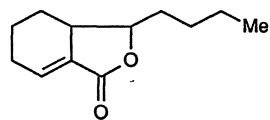
Butylphthalide (79-3)



Butylidene phthalide (79-4)



Senkyunolide (79-5)



Neocnidilide (79-6)