

84.1 Introduction

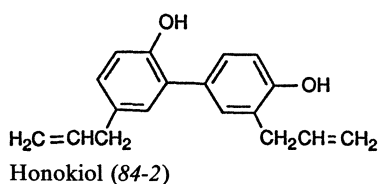
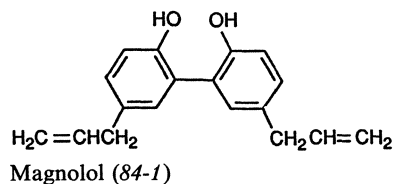
There are three official entries containing *Magnolia* species in the Chinese Pharmacopoeia:

- Xinyi, Flos Magnoliae, is the dry flower buds of *Magnolia biondii* Pamp., *M. denudata* Desr., or *M. sprengeri* Pamp. (Magnoliaceae) collected from late winter to early spring before the buds have flowered. The flower buds are used in traditional Chinese medicine for the treatment of cold and nasal catarrh.
- Houpohua, Flos Magnoliae officinalis, is the dry flower buds of *M. officinalis* Rehd. et Wils. or *M. officinalis* Rehd. et Wils. var. *biloba* Rehd. et Wils., collected in the spring before the buds flower. It is mainly used as a stomachic.
- Houpo, Cortex Magnoliae officinalis, is the dry bark of stem, branch, and root of *M. officinalis* and *M. officinalis* var. *biloba* collected in April to June. It is used as a stomachic and antiasthmatic agent.

84.2 Chemical Constituents

84.2.1 Chemical Constituents of *Magnolia officinalis*

The bark of *M. officinalis* contains as major components magnolol (84-1) and honokiol (84-2) as mentioned above, two substituted biphenols with a propenyl side chain.



Magnolol was isolated from *M. officinalis* and *M. obovata* in 1930 and structurally determined [1], whereas honokiol was first isolated more than 40 years later from *M. obovata* [2] and then from *M. officinalis* [3]. According to crystal and molecular structure data, the benzene rings have a conformation with a 45° dihedral angle, maximizing strong intra- and intermolecular H-binding. The solid structure corresponds to a helix stabilized through H-bonds parallel to the *b*-axis [4].

Quantitative determination of magnolol and honokiol by HPLC [5, 6], TLC spectrophotometry [5, 6], and GC [7] has been described. Samples from various areas