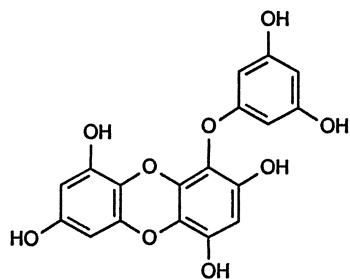


### 60.1 Introduction

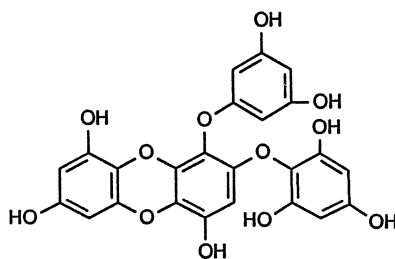
Kunbu, Thallus *Eckloniae* or Thallus *Laminariae*, is the dry thallus of the brown alga *Ecklonia kurome* Okam. (Alariaceae) or *Laminaria japonica* Aresch. (Laminariaceae) collected in summer and fall. It is officially listed in the Chinese Pharmacopoeia and used in treatment of scrofula, goiter, hypertyroidism, and edema.

### 60.2 Chemical Constituents

Some novel phlorotannines with a dibenzo-*p*-dioxin skeleton have been isolated from *E. kurome*. They are generally constructed of phloroglucinol moieties linked by aryl-aryl, aryl-ether bonds or of a mixed type. The structures of the phlorotannins eckol (60-1), phloroeckol (60-2), dieckol (60-3) [1, 2], 6,6'-bieckol (60-4), 8,8'-bieckol (60-5) [2], and a phlorotannin with a furane ring (60-6) [3] were determined on the basis of spectral data. These compounds are the first examples of naturally occurring phlorotannins having a dibenzo-*p*-dioxin skeleton. The structure of eckol was recently established by X-ray analysis [4].



Eckol (60-1)



Phloroeckol (60-2)