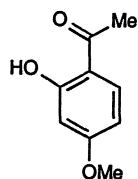
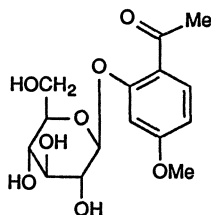


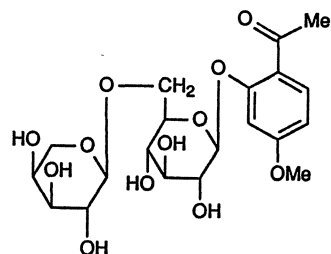
Paeonoside (90-14) was characterized as paeonol- β -D-glucopyranoside [17] and paeonolide (90-15) as paeonol α -L-arabinopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside [20, 21].



Paeonol (90-13)

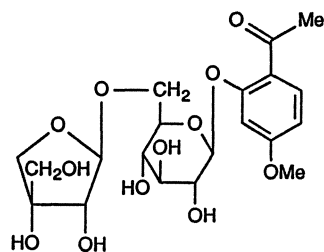


Paeonoside (90-14)



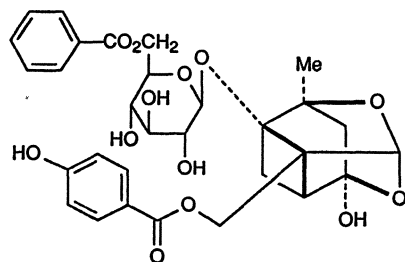
Paeonolide (90-15)

Paeonol D-apio- β -D-furanosyl(1 \rightarrow 6)- β -D-glucopyranoside, named apiopaeonoside (90-16), was also isolated from the root of *P. suffruticosa* [22].



Apiopaeonoside (90-16)

Paeonol was found mostly in periderm, cambium, and neighboring tissues of the root and was also found in xylem [23]. Waste from processing of the herbal medicine was found to contain more than 1.9% paeonol and can thus be utilized for isolation of paeonol [24]. Paeonol in moutan root bark was proven to be formed via phenylalanine and cinnamic acid. Feeding of [14 C]phenylalanine and [14 C]cinnamic acid to the plant resulted in efficient incorporation of 14 C into the corresponding position of paeonol. On the other hand, neither acetate nor malonate were incorporated significantly into paeonol [25]. Moutan root bark also contained paeoniflorin, oxypaeoniflorin, and benzoylpaeoniflorin. These monoterpene glycosides existed mainly in the periderm and neighboring tissues of the root [26]. New monoterpene glycosides benzoyloxypaeoniflorin (90-17) [27] and galloylpaeoniflorin [28] were further isolated.



Benzoyloxypaeoniflorin (90-17)