

Monoterpene Glycoside from Crimean *Paeonia* Species

Aleksej S. Stolyarenko, Vladimir I. Grishkovets, Vasiliy Ya. Chirva

Simferopol State University, 333007, Yaltinskaya street 4, Simferopol, Ukraine

There are two *Paeonia* species, namely *Paeonia tenuifolia* L. and *P. triternata* Pall. ex DC (*Paeoniaceae* Rudolphi) spreading through Crimean peninsula. The roots of *P. tenuifolia* L. are widely used in traditional and officinal medicine at different heart diseases and in some other cases. Earlier only some phenolic compounds and fatty oil have been isolated from these plants.

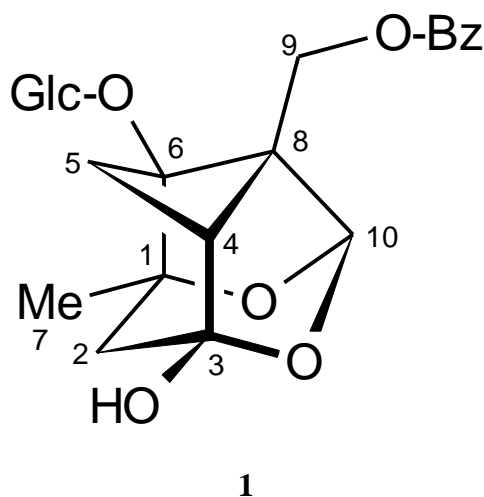
By use of TLC and specific detecting reagents we have studied the ethanol extracts from plant organs: roots, stems, flowers and fruits, all of which contain lipids, phenolic compounds and a large amount of one terpenoid glycoside, predominant in underground organs (roots and tubers) and seeds.

The isolation of this terpenoid glycoside in a preparative scale from dried and disintegrated roots and tubers was carried out by extraction with butanol saturated with water followed with washing of butanol layer by cooled water ammoniac to remove phenolic compounds and finally defatting with heptane. Partially purified butanol extract was subjected to column chromatography on a SiO_2 with ethylacetate-butanol-water eluent to give a pure glycoside in 0.65% yield.

Acid hydrolysis of isolated glycoside gives glucose as a sugar part and different aglycon decomposition products. Alkaline hydrolysis gives benzoic acid besides other products.

The roots of *P. lactiflora* are known to contain the monoterpene glycoside paeoniflorin with a pinan skeleton and its derivatives which structures determined by chemical methods.

We supposed that isolated glycoside is one of them and on the basis of detailed analysis of ^1H - and ^{13}C -NMR - spectra attributed to paeoniflorin (**1**):



The glycoside composition of the *P. triternata* is the same, as the *P. tenuifolia* in qualitative and quantitative respects.