

## The Minkvits Thesis (Sandal Wood) is on the Verge of Extinction

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### ANNOTATION

According to the 2016 edition of the Red Data Book of the Republic of Uzbekistan, four places of growth of this plant have been identified, and more than 50 bushes have been found. Several alkaloids have been found in the Minkvits thesis. This plant was first discovered by the Russian botanist Karl Anotonovich von Meyer (1795-1855). It is included in the "Red Book" of the Republic of Uzbekistan.

**Key words:** Minkvits Thesium, "Red book" Thesium minkwitzianum, Ugom Chatkal, Minkvits thesis-Thesium minkwitzianum-Lenets minkvitsa, Minkvits teziumi-Thesium minkwitzianum-Ленец минквица.

### Introduction:

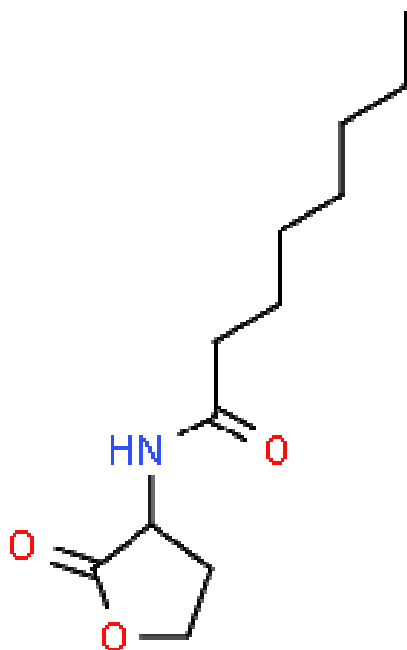
The Minkvits Thesium, or Sandal wood, is a very rare plant. It belongs to two genera: the Santaldosh family, the Santalaceae family is a plant belonging to the genus Lenets. According to the 2016 edition of the Red Book of the Republic of Uzbekistan, four growing places of the plant have been identified, and more than 50 bushes have been found. Several alkaloids have been found in the Minkvits thesium. This plant was first discovered by the Russian botanist Karl Anotonovich von Meyer (1795-1855). It is included in the "Red Book" of the Republic of Uzbekistan. In 1753, Carl Linney used the name Thesium for the seeds of this plant in his book *The Species of Plants*. The name may be derived from the name of the hero of Greek mythology, Tsens. It is a rare endangered plant found in the western Tien Shan mountain ranges. This family is a dicotyledonous plant in the Santalots family. The family includes grasses, shrubs and, in part, trees. Some species are parasites (*Henslowia*, *Fesium*, *Osiris*, *Santalum*) that attach to tree trunks. A perennial plant up to 50 cm tall. The roots are mostly multi-headed and grow many straight stems. The leaves are usually densely arranged alternately without petals. The flowers are small, almost invisible, mostly green or yellow-green, bisexual, crown-shaped. They are located at the tips of short branches or in the axils of leaves. The fruit is elongated, twisted walnut. The flower is elongated, 5-lobed, with elliptical seeds. The leaf veins branch out and form cells. It blooms and bears fruit in late May and early June. The fruits ripen in August-September. However, due to the unfavorable natural conditions and very slow growth, it is almost impossible to reproduce from seed.

**Distribution:** This family is mainly found in temperate climates and is endemic to South Africa. There are 4 growing places in the Western Tien Shan mountains: Boshqizilsay (Uzbekistan), Boroldoytog, Talas Alatogy (Kazakhstan), Beshorol area (Kyrgyzstan) occurs in The Chatkal State Reserve and the Ugam-Chatkal National Park are protected in Uzbekistan. The Republic of Uzbekistan is one of the rarest species listed in the Red Book.

**Growing conditions:** Grows on rocky soils at an altitude of 1400 meters above sea level.

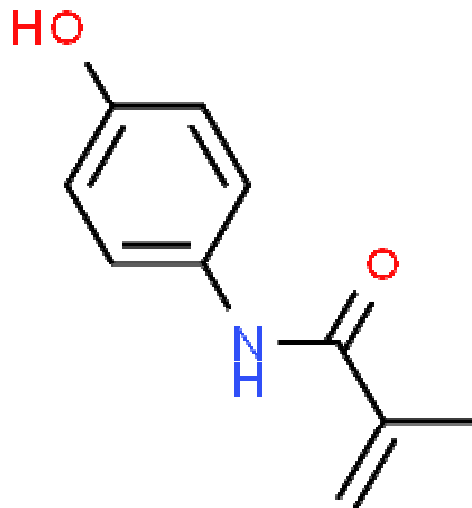
**Quantity:** According to the 2016 edition of the Red Book of the Republic of Uzbekistan, more than 50 tufts of various ages have been identified. When this species was first studied, it was found that there were 7 tufts, 17 in the 1984 edition of the Red Book, and more than 50 in the 2016 edition.

**Taxonomy:** APG III Angiosperm Phylogeny Group World Plant Classification System. There are 200 types. Flowering plant division or angiosperms-Santaldosh family. This family includes 200 genera of 44 genera. It grows very slowly from seed. The main reason for the decline of the Minkvits Thesium is the construction work in the areas where the plant grows and the commercial development of the land. Not enough information about culture. Scientists have also been able to isolate a number of alkaloids from the Minkvits Thesium - Tesnin, Tesinizin.



Tesnin -  $C_{12}H_{21}NO_3$  is found and formed mainly in *Thesium minkwizianum*. They are colorless crystals with a low melting point. The structure was determined on the basis of chemical analysis and spectroscopic evidence.

Tesinizin -  $C_{10}H_{11}NO_2$  124.5 ° C



*Thesium minkwizianum* is a small alkaloid isolated from. It is a strong active substance, mainly in the form of small crystals

The task of young scientists is to study and cultivate such a rare species of plants, to identify new natural compounds in their reproduction and to introduce them in various fields of pharmaceuticals, cosmetics and industry. Not only are such species under special state protection in our country, but it is also important to study the reproduction of plant species that are unique and have medicinal properties.