

Master data ingredient / monograph

Ingredient/plant: American wintergreen (*Gaultheria procumbens*)

Scientific name: *Gaultheria procumbens*
Order: Ericales
Family: Ericaceae
Genus: *Gaultheria*
Species: *Gaultheria procumbens*

Description:

Gaultheria procumbens, also known as the **Eastern Teaberry**, **Checkerberry**, **Boxberry** and **American Wintergreen**, is a small shrub native to northeastern North America. It is low-growing, typically reaching 10–15 cm tall. The leaves are evergreen, elliptic to ovate, 2–5 cm long and 1–2 cm broad, with a distinct oil of wintergreen scent. The flowers are bell-shaped, 6–8 mm long, white, borne solitary or in short racemes. The fruit is an edible red berry 8–15 mm diameter.

The species is endangered in parts of its native range.

While most people, even those living in the mid-Atlantic United States, have never tasted teaberry, somewhat more have tried Clark's Teaberry chewing gum, which is faithful to the taste of the berry. Traditionally it was common to pick and chew a leaf much as one would chew gum.

Properties:

Essential oil of wintergreen shows beneficial effects on blood circulation, which will be enhanced after topical administration of the oil.

Pharmacological properties:

Active ingredients

Fresh leaves of American wintergreen contain:

- Monotroposid ($C_{19}H_{26}O_{12}$), also named *Gaultherin*. In dried leaves *Gaultherin* fades to methyl-salicylate.

Dried leaves of American wintergreen contain:

- essential oil 0,5 – 0,8 %: main components are: methyl-salicylate (amount: 96 – 98 %)
- oenanthal alcohol (1-heptanol) and its ester derivate

Topical and cosmetic properties:

In former times wintergreen oil was an important ingredient for full baths, in order to stimulate blood circulation. In some medicinal preparations, especially against rheumatic complaints wintergreen oil is used. The efficacy in these preparation is caused by methyl-salicylate, which arise during the drying process of fresh wintergreen leaves. Nowadays in medicinal preparation wintergreen oil does not play an important role, due to the fact that methyl-salicylate can be produced technically much more cheaper than the isolation from the plant.

In the cosmetic field products containing wintergreen oil are also available. They usually have significant lower content of wintergreen oil, but exert also beneficial effects on blood circulation. Therefore they mediate a moderate feeling of warming and relaxing of the skin.

Possible interactions:

Due to the fact, that pure wintergreen oil can cause contact allergies it is not recommended to apply pure wintergreen oil to the skin. In case of overdosage symptoms of poisoning like strong gastric or kidney irritations can occur.

In case of oral administration wintergreen oil can cause letal symptoms of poisoning like central nervous paralysis, pulmonary oedema and collapse can occur.

Use:

Teaberry is also an ice cream flavor in regions where the plant grows. It is also used as the flavor of Wrigley's popular Winterfresh chewing gum.

In order for the leaves to produce more than a whiff of the minty methyl-salicylate, they need to be fermented in warm water for several days before drinking.

Limits of administration:

Preparations containing wintergreen oil should not be administered:

- in nurslings and children
- during pregnancy and lactation period
- in patients suffering from asthmatic diseases

Assessment/safety factors and toxicity:

Cosmetic preparations containing wintergreen oil should not be administered over a long-lasting period. An extensive administration in large skin areas should be avoided.

Further remarks and characteristics:

None

References:

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