

149. *GAULTHERIA PROCUMBENS* L. (ERICACEAE) — Wintergreen, Teaberry, Boxberry

The oil of wintergreen is used as a flavoring agent in candies (and I would guess teaberry chewing gum), soft drinks, and dental preparations, especially combined with menthol and eucalyptus. One root beer remedy called for 4 drachms wintergreen oil, 2 sassafras oil, 1 clove oil, and *circa* 120 g alcohol. Methyl salicylate, the main ingredient, has been employed in baths, liniments, and ointments, for pain relief in gout, lumbago, rheumatism, and sciatica.¹⁷ Amerindians ate the berries, even in the snow. Berries used to make pies. Leaves used to make an herbal tea (mountain tea), as a condiment, and a nibble. If children chew the roots for 6 weeks each spring, it will help prevent tooth decay.¹¹ Amerindians smoked and chewed the leaves, prepared by passing them through the top of the fire, more leisurely dried over the fire, without allowing them to burn. Algonquin guides chew wintergreen leaves to improve their breathing during hunting.

Oil used as an anodyne, antiseptic, counterirritant in rheumatism; also, useful in lumbago and sciatica. Medicinally, the whole plant is used as a antiseptic, carminative, diuretic, emmenagogue, galactagogue, nervine, rubefacient, stimulant, and antirheumatic, and as a flavoring in medicine. Kloss recommends the tea as a gargle for sore throat and stomatosis, as a douche for leucorrhea, as a collyrium for conjunctivitis.⁴⁴ Small doses stimulate the stomach, large doses cause vomiting. It may be used for diarrhea, and as an infant's carminative. Quebec Indians rolled the leaves around aching teeth.⁴⁵ Leaves are used in the treatment of asthma. Homeopaths prescribe the leaf tincture for gastritis, neuralgia, pleurodynia, rheumatism, and sciatica;³⁰ also, suggested for epididymitis, orchitis, diaphragmitis, arthritis, and dysmenorrhea.³³ Kloss⁴⁴ mentioned the use of the leaves for catarrh, diabetes, dropsy, fever, gonorrhoea, rheumatism, sciatica, scrofula, and skin ailments. With leaves shaped like South America's coca, these wintergreen leaves and/or fruits were used by North American Indians to keep their breath when portaging heavy loads.⁴⁵

The active ingredient is methyl salicylate, now made synthetically. (Commercial oil of wintergreen or oil of checkerberry is obtained from distillation of the twigs of black birch.) The volatile oil contains 98 to 99% methyl salicylate. Arbutin, ericolin, gallic acid, gaultherine, gaultherilene, gaultheric acid, mucilage, tannin, wax, an ester, triacontane, and a secondary alcohol are also reported.¹⁷ Other acids reported include *O*-pyrocatechusic-, gentisinic-, salicylic-, *p*-hydroxybenzoic-, protocatechusic-, vanillic-, syringic-, *p*-cumaric-, caffeic-, and ferulic-acids.³³

Toxicity — Death from stomach inflammations have resulted from frequent and large doses of the oil. The highest average maximum use level is *circa* 0.04%, in candy. Not listed under FDA § 172.510, 182.10, or 182.20.²⁹ Wintergreen has lectinic, including mitogenic properties. Salicylism usually marked by tinnitus, nausea, and vomiting; may result from excessive dosage of salicylic acid and/or its salts.