

Hamamelis rain



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Hamamelis rain



BOTANY

Hamamelis virginiana L., commonly known as witch hazel, belongs to the Hamamelidaceae family.

It is a small tree or shrub that grows between 1.5 and 3.5 m in height. The bark is brown and smooth. The leaves are deciduous, elliptic to ovate, margins wavy, asymmetrical at the base, between 7.5 and 12.5 cm long. They are almost odourless and have an astringent, mildly bitter, aromatic taste. The flowers are yellow outside and yellowish brown inside, with four characteristic thread-like, about 2 cm long petals. Blooming occurs by the end of autumn, when the leaves fall. The fruit is a capsule.

Hamamelis is native to North America, where it often grows in the damp forests of the South-eastern areas (from Brunswick and Quebec until Minnesota, south of Florida, Georgia, Louisiana and Texas). It is cultivated in the United States and Canada. In Europe, cultivation is at the small scale, especially as an ornamental bush for gardens. The leaves must be harvested in summer.

Hamamelis Rain is produced from the leaves and the flowers of *Hamamelis virginiana* L.



CHEMISTRY

Essential oil

It contains 0.01-0.5% of volatile oil (Meyer-Buchtela, 1999; Wichtl, 1989), among which 40% are aliphatic alcohols, 25% carbonyl compounds, 15% aliphatic esters.

The study of distilled water of *Hamamelis virginiana* L. permitted the identification of volatile components and relative changes under the effects of different storage conditions (Messerschmidt, 1971; Martelli et al, 1977, 1978 and 1979). Among identified compounds were phenylacetaldehyde, linalool oxide, guaiacol, and geranylacetone

Steam volatile extractives from the witch hazel, include α - & β -ionones, hexen-2-al, and 6-methyl-3,5-heptadiene-2-one (Wren, 1988), which are known collectively as "hamamelis ketone".

TRADITIONAL USES



The origin of the name "hamamelis" is much discussed. Some postulate that it comes from the Greek hama = "at the same time" and melis = "fruit", referring to the plant's habit of producing flowers at the same time the previous year's fruits mature. The name "Virginia" refers to the North American state where the plant was first identified. American natives used hamamelis as a medicine since much before the Conquerors arrived. They used bark and leaves decoction to treat inflammation, tumours and skin wounds. These folk uses were later adopted by the North American Eclectic School of medicine. In 1735, hamamelis was introduced into England. In 1882, it was included in the United States Pharmacopoeia. The forked branches of hamamelis have often been used by diviners as a stick to detect water or gold.



In folk medicine, the drug is used in menorrhagia and dysmenorrhea as a haemostatic, and there are similar uses in homeopathy. Total extracts, such as hamamelis extracts or distillates from flowering branches freshly collected (“hazeline” witch hazel water), dry extracts of the leaves (“green hamamelin” and bark (“brown hamamelin”) are applied in the form of infusions, ointments, or suppositories, far more often than herbal teas made from the leaves or bark. Therapeutically, they are used for their astringent, antiseptic and haemostatic properties, and especially as venotonic, properties which have been demonstrated in animal experiments (Wichtl, 1994). An hamamelis ointment containing a distillate of leaves and bark, has been commercially available in Germany since 1878 (Gäble, 1978).

Because of lack of tannins, hamamelis water has no homeostatic effects, although it still has anti-inflammatory activity. Therefore, hamamelis water is recommended to treat muscle sprain and acne lesions, for sun protection (in former times), and for eye-related pathologies such as conjunctivitis and corneal ulcers (in the later cases, hamamelis water must be diluted). It is an ingredient of several haemorrhoids-relieving ointments, deodorants, soaps, creams to treat varicose veins, shaving foam and astringent products, in spite of the lack of tannins.

COSMETIC PROPERTIES

Antimicrobial activity



Hamamelis essential oil demonstrated bacteriostatic properties – especially against Gram negative bacteria –and antiviral action (mainly exerted by proanthocyanidins) against type 1 *Herpes simplex*, (Alonso J., 2004).



Bacterial colonization plays an important role in the pathogenesis of atopic dermatitis and intertrigo. Gloor M et al. (2002) carried out a study to determine the antimicrobial activity of a topical dermatological preparation containing Hamamelis distillate (90%), urea (5%) and excipients. The preparation was applied to 15 healthy volunteers using the simple occlusion test. This formulation was found to be active against *Staphylococcus aureus* and *Candida albicans*.

Therefore, Hamamelis Rain is highly recommendable to formulate cosmetic products with antiseptic activity.

Anti-inflammatory activity

Korting *et al.* (1993), using UV-induced erythema and skin stripping in human volunteers, evaluated The anti-inflammatory activity of hamamelis distillate with respect to drug concentration (0.64 mg/2.56 mg hamamelis ketone/100 g) and the effect of the vehicle (O/W emulsion with/without phosphatidylcholine (PC) in an experimental study. The effects were compared with those of chamomile cream, hydrocortisone 1% cream and 4 base preparations.

UV-induced erythema at 24 h was suppressed by low dose hamamelis PC-cream and hydrocortisone cream. Hydrocortisone appeared superior to both hamamelis vehicles, hamamelis cream (without PC) and chamomile cream. The latter preparation was also less potent than hamamelis PC-cream. Inflammation was also less pronounced following low dose hamamelis PC-cream and chamomile cream. Hamamelis PC-cream, however, appeared less potent than hydrocortisone.

The results have demonstrated mild anti-inflammatory activity of a hamamelis distillate (standardised for hamamelis ketone content) presented in a phosphatidylcholine-containing vehicle.

Later, Hughes-Formella *et al.* (1998) also demonstrated a low level of anti-inflammatory activity against UV-induced erythema in topical preparations containing hamamelis distillate.

Therefore, Hamamelis Rain is highly recommendable to formulate cosmetic products for the treatment of sensitive and/or irritated skin.



COSMETIC APPLICATIONS

Action	Active	Cosmetic Application
Anti-microbial	Essential oil	Antiseptic
Anti-inflammatory	Essential oil	Sensitive/irritated skin Anti-ageing Photo-protection

RECOMMENDED DOSE

The recommended dose is between 5% and 25%.

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