



PREMIER HORSE CHESTNUT EXTRACT

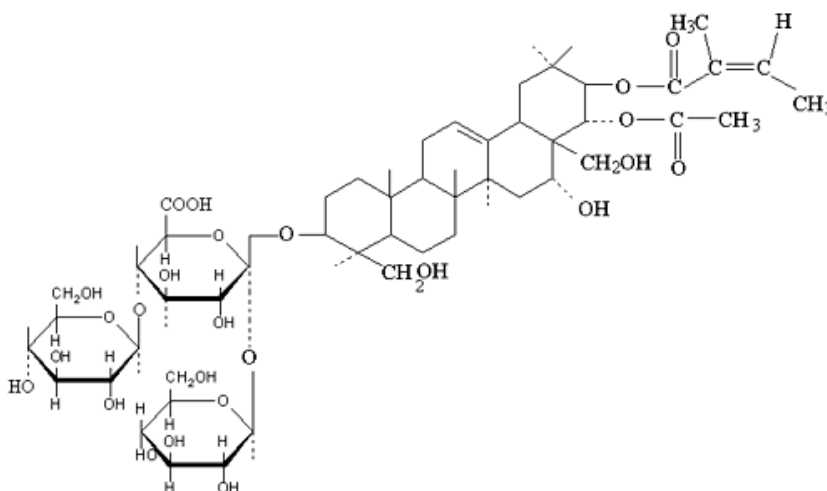
Product Code #463400

INCI name: Aesculus Hippocastanum (Horse Chestnut) Seed Extract

Premier Horse Chestnut Extract is a standardized extract obtained from the seeds of the Horse Chestnut (*Aesculus hippocastanum*) tree.

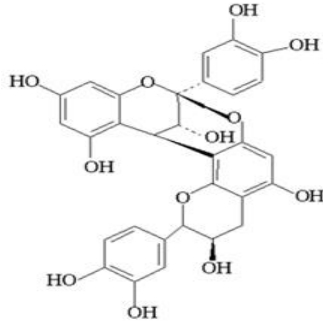
The extract is standardized to contain a minimum of 90% Escin, a triterpenic saponin mixture known to help maintain healthy blood circulation and strengthen capillaries and veins, as well as the bioflavonoids Proanthocyanidin A2 and the coumarin, Esculin.

Recent structural evidence reveals that the two major glycosides in the escin mixture contain the aglycone protoescigenin, glucuronic acid and two glucose molecules. The two aglycones differ only at the C-21 position, which is acylated by either angelic acid or tigilic acid.

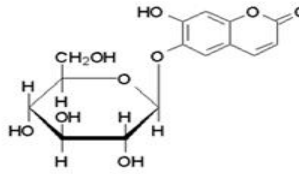


Escin

Other biologically active components include the bioflavonoid Proanthocyanidin A2 and the coumarin, Esculin.



Proanthocyanidin A2



Esculin

The literature reports the anti-edema, anti-exudative and vasoprotective actions are reported to be mainly due to Escin. Orally and topically administered Proanthocyanidin A2 is reported to have wound healing actions. Esculin is reported to be useful in improving microcirculation.

The topical efficacy has been shown in several studies:

- A 2% Escin emulsion was shown to improve skin and adipose tissue microcirculation, increase blood flow at the capillary level and decrease edema.
- A 2% Escin gel effectively reduced experimentally induced bruises (broken blood vessels), inflammation and tenderness.
- Topical application of a 3% Esculin emulsion improved capillary protection and the inhibition of the enzymes hyaluronidase and collagenase.
- Topical application of Proanthocyanidin A2 is also reported to have wound healing action.

Topical cosmetic efficacy for Horse Chestnut Extract includes:

- Improvement of microcirculation in skin and scalp applications
- Potent Anti-inflammatory effects
- Wound healing effects via protection of the extracellular matrix (inhibition of hyaluronidase and collagenase)
- Free radical scavenging action

References:

1. E. Bombardelli et al. *Aesculus hippocastanum*. *Fitoterapia* 67:483-511 (1996).
2. E. Bombardelli et al. Topical anti-inflammatory activity of complexes of Escin and Sterols with Phospholipids – Part I, *Fitoterapia* 60, Supplemental n. 1,39 (1989).
3. SB Curri et al. Topical anti-inflammatory activity of complexes of Escin and Sterols with Phospholipids – Part II, Anti-edema properties in the treatment of panniculopathies of the thighs and breast, *Fitoterapia* 60, Supplemental n. 1,45 (1989).
4. C Calabrese and P Preston Report of the results of a double-blind, randomized, single-dose trial of a topical 2% Escin gel versus placebo in the acute treatment of experimentally-induced hematoma in volunteers. *Planta Medica* 59:394-397 (1993).