

SIMPLYCIS

A premium mild soothing shampoo for puppies and dogs with sensitive skin

SIMPLYCIS < SI-MPLY-CIS

The name is inspired by the Greek words « συν », which means « together with » and « πλύσις » which means « washing »

Liddell G, Jones HS, Scott R, McKenzie R. *A Greek-English Lexicon*. Oxford: Clarendon Press; 1940

Non-medicated shampoos are used for routine cleansing and mild, non-irritant, allergen-free products are preferred. Opinions vary widely as to how often they may be employed, but it is rarely necessary to use them more than once every two weeks. Cleansing with a moisturizing shampoo helps maintain a normal skin barrier and overall skin balance, especially in dogs with sensitive skin and puppies. It is crucial that the cleansing properties are attained through mild, non-irritant cleansing agent, such as Sodium Lauryl Glucose Carboxylate and Lauryl Glucoside, which are the alternative cleansing agents without sulfates in Simplycis. Particularly in cases of abraded or sensitive skin, Simplycis, which contains actives such as *Aloe vera* extract, St John's wort extract, *Calendula* extract, Panthenol and Allantoin, can have a supportive role in skin repair and skin care in general.

Aloe vera extract

Over the past 20 years, many studies have verified the use of *Aloe vera* as an accelerator and as an adjunct in the healing and recovery process by both topical and oral administration. In a study on wound contraction in excisional wounds treated with topical antimicrobials, the topical treatment of rats with *Aloe vera* resulted in an increase in tissue resistance¹. Another study compared the effects of the same protocol of burns on 3% (16 cm²) of the body surface of guinea pigs with silver sulfadiazine, *Aloe vera* gel extract and salicylic acid and showed a significantly lower healing time with the use of *Aloe vera* and sulfadiazine compared to salicylic acid². The healing process was evaluated in a study in Type 2 Diabetic Rats where significantly more scar shrinkage occurred in subjects treated with *Aloe vera*, compared to that of the control group, starting from the second day³. Furthermore, in treated subjects, the progression of the inflammatory phase was more rapid, the necrotic tissue was eliminated more efficiently, angiogenesis was more active, and the extracellular matrix increased along with the release of tissue growth factors, which may have been due to the presence of some aloe polysaccharides. Another study compared the effects of topical administration of the gel contained in two additional aloe species: *Aloe arborescens* Miller and *Aloe ferox* Miller in rats and rabbits demonstrated that the healing rate was higher in treated patients compared to untreated patients⁴. Based on the macroscopic assessment of the severity of the

injuries, performed with the Bates–Jensen Wound Assessment Tool (BWAT), which assigns a score from 1 (not severe) to 5 (very bad) to some characteristics of the lesion itself, the authors have demonstrated the antibacterial action of aloe, excluding the possible occurrence of hypersensitivity due to topical treatment. In a randomized controlled study in cats and dogs⁵, *Aloe vera* was more effective than silver sulfadiazine, in accelerating wound shrinkage, reducing healing time and decreasing the severity of the associated injuries. The weight of evidence has resulted in the daily clinical use of *Aloe vera* in the treatment of wounds in both dogs and cats.

Calendula extract

Calendula flower contains secondary metabolites, such as polyphenols, flavonoids and triterpenoids, which could support wound healing action. *In vivo* studies in animals^{6,7} have provided evidence for improved recovery from the inflammation phase and increased production of granulation tissue in calendula extract treatment groups. This finding may be explained by the anti-inflammatory and enhanced fibroblasts activation and migration properties of calendula, as observed in the *in vitro* studies. A combination of these effects could potentially explain the wound healing expressed effect.

St John's wort extract (*Hypericum perforatum*)

Dermatological applications of St. John's wort (SJW) have a long tradition. Although SJW contains a broad spectrum of pharmacologically active substances, two chemical classes appear as the most interesting for dermatological applications: the phloroglucinols (hyperforins) and the naphthodianthrone (hypericins). Hyperforins have potent antimicrobial, antioxidant, anti-inflammatory, and anticancer effects and stimulate growth and differentiation of keratinocytes. Hypericins also show antimicrobial, anti-inflammatory, and anticancer activities, especially when irradiated with visible light, and their photo-induced cytotoxicity can be used for photodynamic treatment of non-melanoma skin cancer but also for diagnostic purposes. There are some indications for synergistic activity of hyperforins and hypericins, as well as other constituents such as flavonoids and biflavones, which may explain why traditional preparations seem to have robust effectivity in spite of their variable composition. Topical St. John's wort preparations such as oils or tinctures are used for the treatment of minor wounds and burns, sunburns, abrasions, bruises, contusions, ulcers, myalgia, and many others. Broad pharmacological research supports the use in these fields⁸.

Panthenol

This compound has two enantiomers, D and L, of which only D- panthenol (dexpanthenol) is biologically active through its enzymatic conversion to pantothenic

acid, a constituent of coenzyme A. Topical panthenol is well tolerated by the skin, with minimum irritation and sensitization. The topical application of dexpanthenol provides a moisturizing action and enhances skin barrier function, while reducing skin roughness and inflammation after SLS- induced irritation⁹. It has been also shown to promote wound healing, according to multiple clinical studies, possibly due to the activation of fibroblast proliferation, cell migration, attachment and increased collagen synthesis^{10,11}. Moreover, pantothenic acid appears to be essential to normal metabolic processes of epithelial tissues¹². Topical dexpanthenol has also shown to reduce inflammation¹³.

Inulin

Inulin is an unbranched polysaccharide belonging to the class of fructans and is obtained from plant sources, mainly from common chicory (*Cichorium intybus*). It has prebiotic properties, promoting a healthy skin flora. Another advantage of inulin is that it makes it possible to eliminate ionic surface-active agents from shampoo formulations as it acts as a conditioning agent¹⁴.

Allantoin

Allantoin is a naturally occurring nucleotide, often extracted from the comfrey plant. The mechanism of action of allantoin is still unclear, but it has been shown to modulate the inflammatory response by inhibiting the recruitment of inflammatory cells at the wound site, and preventing the release of reactive species responsible for oxidative stress, while promoting fibroblast proliferation and synthesis of extracellular matrix during the wound healing process in *in vitro* studies¹⁵. *In vivo* studies confirm that allantoin has a moisturizing, keratolytic and soothing effect, while enhancing skin repair^{16,17}.

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