

Solutions Pharmacy – Scar Treatment & Wound Care Compounds

**** CALL PHARMACY FOR PRICING DETAILS ****

1-800-523-1486

1. PracaSil™-Plus (anhydrous silicone base w/Pracaxi oil)

- * Uses: new scars, old scars, surgical scars, stretch marks (from pregnancy or growth), keloids, acne scars and any skin conditions that would benefit from barrier protection.
 - > Pracaxi oil has multiple beneficial properties: anti-inflammatory, antioxidant, antibacterial and antifungal¹
 - > The mechanism of action of silicone therapy has not been completely determined but is likely to involve occlusion and hydration of the stratum corneum with subsequent cytokine-mediated signaling from keratinocytes to dermal fibroblasts.²
- * Warnings/Precautions: Not for oral use and causes eye irritation
- * Usual Dosage: Apply to scar(s) twice daily (2 to 6 grams)

Comments: Honey-like consistency. It doesn't wash off easy, therefore increasing barrier protection. Can be used in animals. Can be used alone or as the base vehicle for single or multiple active ingredients:

- **Aloe Vera (0.5%):** soothes and heals, burns
- **Betamethasone (0.1% Valerate, 0.05% Dipropionate):** Controls inflammation and depresses migration of fibroblasts
- **Caffeine (0.1 – 1%):** Induces differentiation and proliferation in epidermal keratinocytes
- **Ketoprofen (10 – 20%):** Reduces Inflammation
- **Lidocaine (5 – 10%):** Anesthetic
- **Mupirocin (2%):** Topical antibiotic
- **Pentoxifylline (0.1 – 0.5%):** Decreases collagen production, increases activity of collagenase in dermis, inhibits fibroblast hyperactivity, and improves peripheral tissue oxygenation presumably through enhanced blood flow
- **Retinoic Acid (0.05 – 1%):** Not for use during pregnancy, may require physician oversight and helps prevent the breakdown of collagen
- **Salicylic Acid (2 – 5%):** Decreases inflammation and increases skin turnover
- **Silver Sulfadiazine (1%):** Bactericidal, used primarily in second and third degree burns
- **Tamoxifen (1 – 2%):** Decreases estrogen dependent collagen production
- **Tranilast (0.5 – 2%):** Inhibits collagen synthesis of fibroblasts from keloid and hypertrophic scar tissue through suppressing the release of TGF-beta 1 from the fibroblasts themselves, and is an anti-allergic agent that blocks the release of chemical mediators, such as histamine and leukotrienes, from mast cells³⁻⁴
- **Verapamil (5 – 10%):** Decreases calcium channel dependent production of collagen and fibronectin and their release from fibroblasts, increases the activity of collagenase, and beneficial for fibrotic tissue disorders such as plantar fibromatosis

2. Scar Care Cream Enhanced (anhydrous silicone base w/Carapa guaianensis seed oil)

*Uses: old and new scars - acne, burns, hypertrophic scars, keloid scars, scar tissue, stretch marks, and surgical scars

> Carapa guaianensis oil (aka andiroba) exhibits anti-inflammatory and anti-allergic properties. These properties are accomplished through inhibiting edema formation and impairing signaling pathways triggered by histamine, bradykinin and platelet-activating factor.⁵ The oil is a Natural Moisturizing Factor (NMF) known to promote healing and enhance barrier protection. This characteristic is contributed to it containing essential fatty acids (oleic, palmitic, stearic, and linoleic acids).⁶

> The mechanism of action of silicone therapy has not been completely determined but is likely to involve occlusion and hydration of the stratum corneum with subsequent cytokine-mediated signaling from keratinocytes to dermal fibroblasts.²

* Warnings/Precautions: Not for oral use and causes eye irritation

* Usual Dosage: Apply to scar(s) twice daily (2 to 6 grams)

Comments: Reduces redness and lightens most scars. *Can be used alone or as the base vehicle for single or multiple active ingredients (same ingredients available as used in PracaSil™-Plus)*

3. Wound Care Cream (polyethylene glycol gel w/meadowsweet extract)

*Use: wound management

> Polyethylene glycol (PEG) gel promotes faster healing by creating the optimal healing environment for acute and chronic wounds by encouraging clean, moist conditions.⁷⁻⁹

> Meadowsweet extract demonstrates antibacterial activity¹⁰⁻¹², anti-inflammatory and healing properties¹³⁻¹⁴, and antioxidant effects.¹² Effects are contributed to its high content of phenolic compounds, especially flavonoids, and salicylates.

* Warnings/Precautions: Not for oral use. Cream should not be used in conditions where absorption of large amounts of PEG is possible (e.g. extensive burns, large surface area wounds) especially if there is evidence of moderate to severe renal impairment. Use cautiously in patients with an aspirin allergy due to salicylate content. Minimal chance of additive effect interaction with other salicylate-containing drugs (e.g. aspirin, choline mg trisalicylate, salsalate).¹⁵

* Usual Dosage: Apply to wound two to three times daily

Comments: Occlusive, adherent, dries clear, water-washable, non-greasy, and odorless. Okay to use on sensitive skin. *Can be used alone or as the base vehicle for single or multiple active ingredients:*

- **Aloe Vera (0.5%):** soothes and heals, burns
- **Mupirocin (5%):** topical antibiotic
- **Sesame Oil:** nasal mucosa dryness and epistaxis^{16, 17}
- **Silver Sulfadiazine (1%):** Bactericidal, used primarily in second and third degree burns

- **Sucralfate (7%):** see sucralfate cream below
- **Additional ingredients available... see PracaSil™-Plus active ingredients list**

4. Sucralfate 4-7% in Versabase Cream

- *Uses: Epithelial wound healing (ulcers, inflammatory dermatitis, burn wounds, anal fistulotomy wounds)^{18,19,20,21}
 - > Sucralfate enlarges granulation tissue surface and promotes angiogenesis or neovascularization.^{18,21} It also possesses antibacterial activity.²⁰
 - > Versabase simulates the natural moisturizing barrier of the skin. It contains natural emulsifiers, has no parabens, PPG or petrolatum, oil-free, and hypoallergenic.
- *Warnings/Precautions: Topical sucralfate has been shown to not increase serum Al levels and is well tolerated.^{22,23}
- *Usual dosage: Apply to affected area(s) two to four times daily

Comments: Strength and frequency depend on diagnosis and severity.

5. Lakeside Specialty Cream

- * Uses: Wound care/healing, mild to moderate pressure ulcers, barrier protection, adult diaper rash
 - > Phenol, starch, boric acid, zinc oxide, petrolatum, benzalkonium chloride, silicone
 - > Antiseptic
 - > Anti-bacterial and anti-fungal
 - > Astringent
 - > Helps keep wound area moist and clean (barrier)
- * Warnings/Precautions: Application inside the nose
- * Usual Dosage: Apply to affected area 2 to 3 times per day

Comments: May cause burning, stinging, itching, and tingling when applied to inflamed areas.

References:

1. Costa, M., Muniz, M., Negrao, C., Costa, C., Lamarao, M., Morais, L., Junior, J. and Costa, R. 'Characterization of pentaclethra macroloba oil'. *Journal of Thermal Analysis and Calorimetry*. 2014; 115:2269-75.
2. Mustoe TA. Evolution of silicone therapy and mechanism of action in scar management. *Aesthetic Plast Surg*. 2008 Jan;32(1):82-92.
3. Suzawa H, Kikuchi S, Arai N, Koda A. The mechanism involved in the inhibitory action of tranilast on collagen biosynthesis of keloid fibroblasts. *Jpn J Pharmacol*. 1992 Oct;60(2):91-6.
4. Yamada H, Tajima S, Nishikawa T, Murad S, Pinnell SR. Tranilast, a selective inhibitor of collagen synthesis in human skin fibroblasts. *J Biochem*. 1994 Oct;116(4):892-7.
5. Henriques MD, Penido C. The therapeutic properties of carapa guianensis. *Curr Pharm Des*. 2014; 20(6):850-6.
6. Nayak BS, Kanhai J, Milne DM, Pinto Pereira L, Swanston WH. Experimental evaluation of ethanolic extract of Carapa guianensis L. Leaf for its wound healing activity using three wound models. *Evid Based Complement Alternat Med*. Epub 2011 Mar 17:419612. doi: 10.1093/ecam/nep160.
7. Hutanu D, Frishberg MD, Guo L, Darie CC. Recent applications of polyethylene glycols (PEGs) and PEG derivatives. *Mod Chem appl*. Epub 2014; 2:132. doi:10.4172/2329-6798.1000132.
8. Cho CY, Lo JS. Excision and repair: dressing the part. *Dermatol Clin*. 1998; 16:25-47.
9. Mogosanu GD, Grumezescu AM. Natural and synthetic polymers for wounds and burns dressing. *Int J Pharm*. 2014; 463(2):127-36.
10. Rauha JP, et al. Antimicrobial effects of Finnish plant extracts containing flavonoids and other phenolic compounds. *Int J Microbiol*. 2000; 56(1):3-12.
11. Cushnie TP, Lamb AJ. Antimicrobial activity of flavonoids. *Int J Antimicrob Agents*. 2005 Nov;26(5):343-56.
12. Proestos C, Chorianopoulos N, Nychas GJ, Komaitis M. RP-HPLC analysis of the phenolic compounds of plant extracts. investigation of their antioxidant capacity and antimicrobial activity. *J Agric Food Chem*. 2005;53(4):1190-5.
13. Drummond EM, Harbourne N, Marete E, Martyn D, Jacquier J, O'Riordan D, Gibney ER. Inhibition of proinflammatory biomarkers in THP1 macrophages by polyphenols derived from chamomile, meadowsweet and willow bark. *Phytother Res*. 2013 Apr; 27(4):588-94.
14. Nesterova IuV, Povet'eva TN, Aksinenko SG, Suslov NI, Gaïdamovich NN, Nagorniak IuG, Popova EV, Kravtsova SS, Andreeva TI. Evaluation of anti-inflammatory activity of extracts from Siberian plants. *Vestn Ross Akad Med Nauk*. 2009;(11):30-4.
15. *Natural Medicines Comprehensive Database*. 7th ed. Stockton, CA: Therapeutic Research Faculty; 2005:863.
16. Reh DD, Hur K, Merlo CA. Efficacy of a topical sesame/rose geranium oil compound in patients with hereditary hemorrhagic telangiectasia associated epistaxis. *Laryngoscope*. 2013 Apr; 123(4):820-2.
17. Johnsen J, Bratt BM, Michel-Barron O, Glennow C, Petruson B. Pure sesame oil vs isotonic sodium chloride solution as treatment for dry nasal mucosa. *Arch Otolaryngol Head Neck Surg*. 2001 Nov;127(11):1353-6.

References:

18. Masuelli L, Tumino G, Turriziani M, Modesti A, Bei R. Topical use of sucralfate in epithelial wound healing: clinical evidences and molecular mechanisms of action. *Recent Pat Inflamm Allergy Drug Discov.* 2010 Jan;4(1):25-36.
19. Gupta PJ, Heda PS, Shirao SA, Kalaskar SS. Topical sucralfate treatment of anal fistulotomy wounds: a randomized placebo-controlled trial. *Dis Colon Rectum.* 2011 Jun;54(6):699-704.
20. Markham T, Kennedy F, Collins P. Topical sucralfate for erosive irritant diaper dermatitis. *Arch Dermatol.* 2000 Oct;136(10):1199-200.
21. Hollander D, Tytgat G. *Sucralfate: From Basic Science to the Bedside.* New York, NY: Plenum Medical Book Company; 1995:156-51.
22. Banati A, Chowdhury SR, Mazumder S. Topical use of Sucralfate Cream in second and third degree burns. *Burns.* 2001 Aug;27(5):465-9.
23. Burkhart CG, Black C, Burkhart CN. A topical application containing sucralfate, zinc oxide and ketoconazole provides high patient satisfaction in the treatment of intertrigo. *Open Dermatol J.* 2009, 3, 11-13.