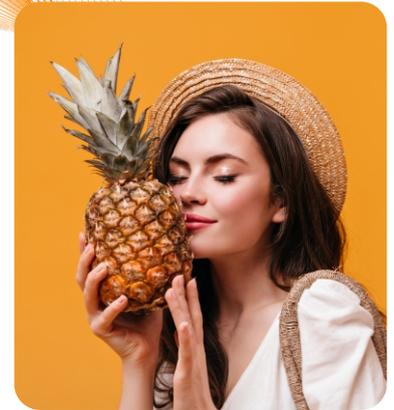


# Met Broma™ (Bromelain)

## BIOTECH EDGE

Sustainably sourced through advanced **bio-extraction technology**, Bromelain exemplifies the power of green biotechnology in skin renewal. Its enzymatic precision mirrors nature's own exfoliation process, delivering controlled proteolytic activity that renews the skin without irritation or barrier disruption. Biotech refinement ensures optimal enzyme stability and activity, transforming Bromelain into a high-efficacy, **clean-label exfoliant** ideal for modern formulations. It represents the new generation of biotech-driven actives that merge gentle exfoliation with soothing, brightening, and reparative benefits for visibly radiant, balanced skin.



Unlike physical exfoliants that can cause micro-tears, or chemical acids that may disrupt the skin barrier, Bromelain works breaking down **keratinized protein** structures to gently detach dead skin cells and promote a smoother, revitalized surface.

Beyond exfoliation, Bromelain helps **reduce hyperpigmentation** by clearing melanin-rich keratinocytes and slowing melanin production, leading to a brighter, more even skin tone. It also calms irritation and minimizes visible redness, making it ideal for multi-functional skincare.

### PRODUCT DETAILS

INCI name: <b>Bromelain</b>	Recommended dosage: <b>0.1 - 1%</b>	Appearance: <b>Off-white to light beige powder</b>	Activity: <b>2400 GDU/g</b>
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## APPLICATIONS :



Exfoliating facial masks and peels



Cleansers and scrubs



Anti-acne and blemish treatments



Post-procedure soothing gels or serums



Brightening and anti-aging formulations

## KEY FEATURES :

- Gentle enzymatic exfoliant that removes dead skin cells without barrier disruption
- Supports collagen restructuring and dermal regeneration
- Provides antioxidant protection to defend against oxidative stress
- Promotes tissue repair and Facilitates wound healing by supporting tissue recovery
- Regulates melanin deposition to support an even skin tone

## WHAT IT BRINGS TO YOUR FORMULATION :

- Delivers a refined, smooth, and revitalized skin texture
- Calms visible irritation, making formulations suitable for sensitive skin
- Improves penetration and efficacy of co-active ingredients
- Adds a natural radiant glow without residual pigmentation
- Enhances overall formulation performance with multi-functional skincare benefits

## EFFICACY STUDIES :

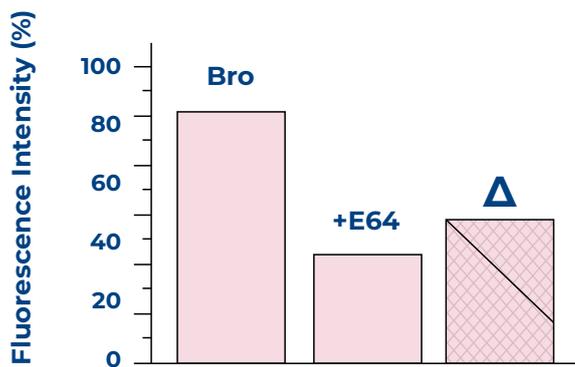


Fig 1: Bromelain (Bro) displays collagenase activity in vitro retaining significant activity (Δ) even in presence of protease inhibitor (E 64) [1].

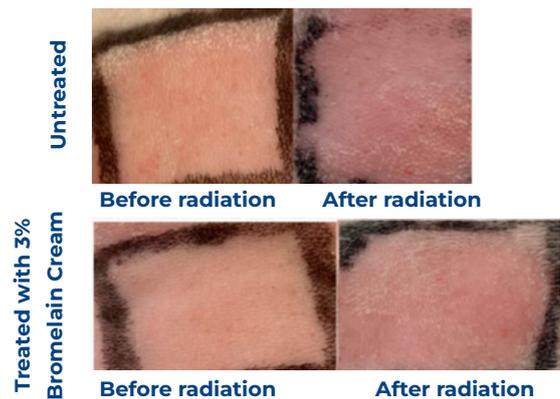


Fig 2: Rabbit skin treated with 3 % bromelain cream (in vivo) displayed visible recovery in UV-induced erythema compared to untreated animal [2].

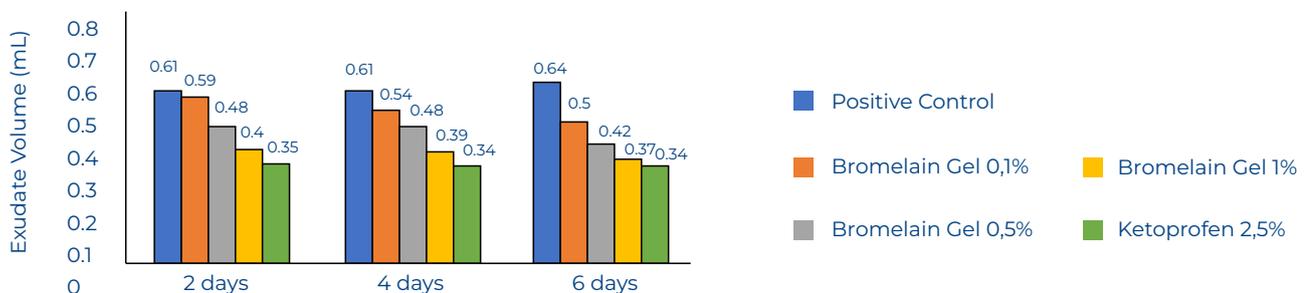


Fig 3: Bromelain containing gel with various concentrations (0.1 %, 0.5 % & 1.0 %) effectively reduced the formation of wound exudates compared control over 6 days. Efficacy of 1 % bromelain gel was found at par with the standard treatment i.e. 2.5 % Ketoprofen [3].

## PROVEN BENEFITS :

- Effectively restructures collagen structure to improve skin elasticity and firmness.
- Helps recover from UV induced skin redness
- Reduces inflammation at damaged tissue and aids faster healing
- Bromelain's milder proteolytic activity provides gentle exfoliation of skin
- Improves absorption of actives by removing surface debris

## CERTIFICATION:



Reference:

- [1] Brito, Adrienne MM, et al. "Collagenase activity of bromelain immobilized at gold nanoparticle interfaces for therapeutic applications." *Pharmaceutics* 13.8 (2021): 1143.  
 [2] Marissa, Zahra, et al. "Antioxidant and Photoprotective Activity of Bromelain Cream: An In Vitro and In Vivo Study." *Cosmetics* 12.2 (2025): 41.  
 [3] Badriyya, Elsa, et al. "Topical anti-inflammatory activity of bromelain." *Pharmacognosy Journal* 12.6s (2020).