

# KALIBIOME

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## ORIS

### >> POSTBIOTICS: A NEW CONCEPT FOR MICROBIOTA CARE

#### EXCLUSIVE POSTBIOTICS FOR ORAL CARE AND SENSITIVE GINGIVA

Kalibiome postbiotics are specialties aimed to balance skin microbiota and overcome the criticalities of the traditional prebiotic and probiotic based actives. Compared to prebiotics they show higher specificity of action; when compared to probiotic derivatives, they proved maximum stability in presence of cosmetics preservatives and absence of side effects, given the lack of bacterial fragments and living bacteria in their composition.

Kalibiome is a complex of pure peptides, fatty acids and biosurfactants released by commensal bacteria through a patented bio-fermentation (PB TECH®) that enables to obtain reproducible postbiotics able to soothe sensitive gingiva, repair damaged tissues, balance oral microbiota equilibrium, reduce inflammation and dysbiosis in periodontitis.

### >> POSITIONING

#### TECHNOLOGY HIGHLIGHTS

- Postbiotics complex with concentrated and reproducible composition
- Obtained by controlled bio-fermentation, patented technology, no bacterial fragments/toxins presence, absence of side effects and high tolerability
- Compatible with cosmetics preservatives
- Preservative free (powder form)
- Storage at room temperature
- Low concentration of use ( $\geq 0.1\%$ )

#### FEATURES AND APPLICATIONS

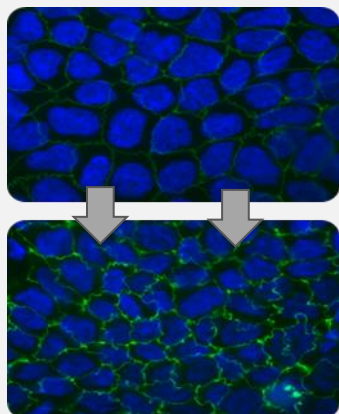
- Immune system modulation and soothing action
  - Oral mucosa barrier integrity increase
  - Regeneration of damaged gingiva, hyaluronic acid and collagen increase
  - Oral microbiota balancing and protection against broad range of microbes and virus
  - Free radical reduction
- Ideal for oral care products for gingiva



PATENTED



### ORAL MUCOSA BARRIER INTEGRITY INCREASE

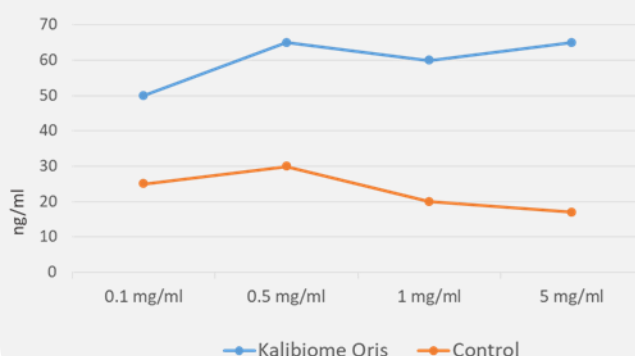


Instrumental analysis (TEER) prove that even in presence of pathogens, Kalibiome keeps the integrity of oral mucosa barrier as in healthy tissues

Kalibiome increases keratinocyte compactness by stimulating the production of Z-O1 tight junctions (green fluor.), even in presence of pathogens

### GINGIVA REGENERATION

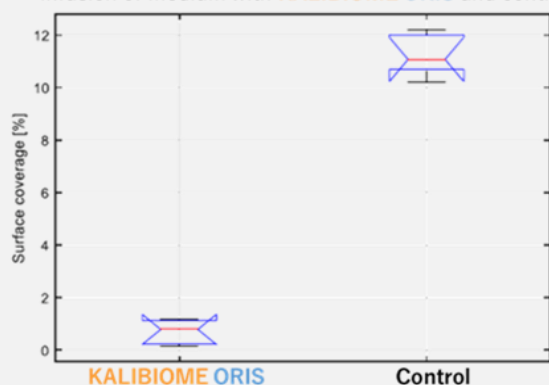
Hyaluronic Acid (keratinocytes)



Kalibiome increases the production of hyaluronic acid in keratinocytes and pro-collagen I in fibroblast, key components for gingival integrity

### INHIBITION OF PATHOGEN BACTERIA BIOFILM ONSET

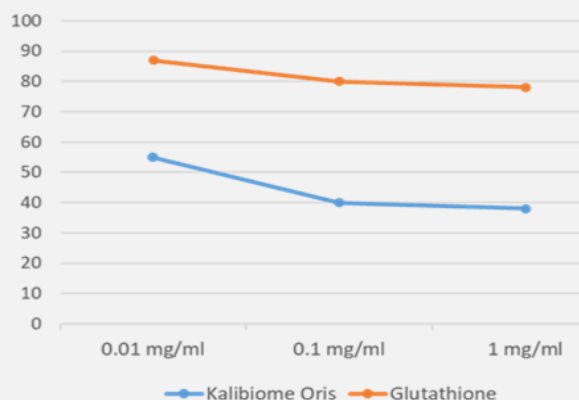
Surface coverage of p. Aeruginosa after 280 mins of continuous infusion of medium with KALIBIOME ORIS and control



Kalibiome Oris inhibits bacterial biofilm formation, with selective action against oral pathogens (eg. Pseudomonas aeruginosa)

### FREE RADICAL REDUCTION

% OF PRODUCTION OF MIT-C DEPENDENT SUPEROXIDE



Kalibiome Oris reduces free radicals more effectively than GSH (glutathione), reducing periodontal disorders and oral inflammations

## >> TECHNICAL OVERVIEW

PH OF USE	% OF USE	APPLICATIONS	SOURCING	FORMULATION TIPS
4.5 ÷ 8.0	0.1 ÷ 0.5	Toothpaste, mouthwash, dental gels and medical devices	Biotechnology	Presolubilize in water and add to the end product by thorough stirring in cold process

[ INCI NAME : Lactobacillus Ferment, Mannitol ]