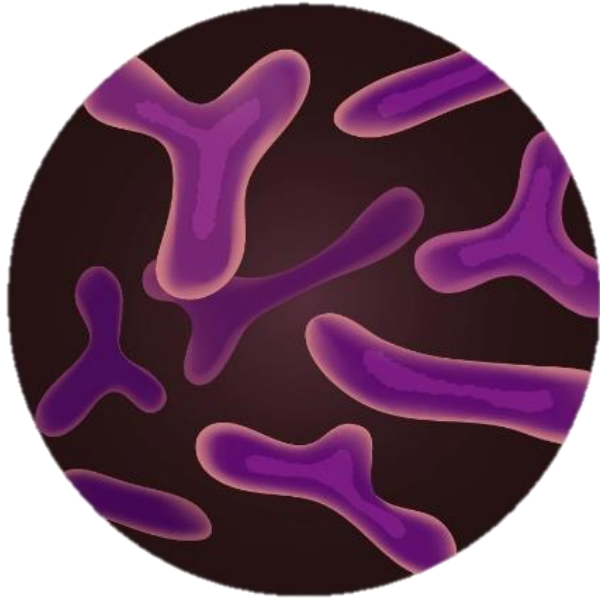




Natori Bifida Ferment Lysate HD



Bifidobacterium

INCI name

Bifida Ferment Lysate, 1,2-Hexanediol

Natori Bifida Ferment Lysate HD

Natori Bifida Ferment Lysate HD is a fermented ingredient derived from the bacterium *Bifidobacterium bifidum*. Bifida Ferment Lysate is believed to help improve the skin's barrier function, enhance moisture retention, and support the skin's natural defense mechanisms. It is often included in anti-aging and hydrating formulations.



Moisturizing



Repairing



Bifida Ferment Lysate (BFL) is a natural extract derived from Bifidobacterium through a process of fermentation, where it produces various beneficial substances for skincare. These include small molecules like amino acids, vitamin B group, and minerals. In a recent study involving real people, it was discovered that using a gel-based product containing BFL on the skin helped safely and effectively treat mild to moderate acne.

Efficacy – Literature Data

The effects of *Bifida Ferment Lysate*

< Skin barrier maintenance function >

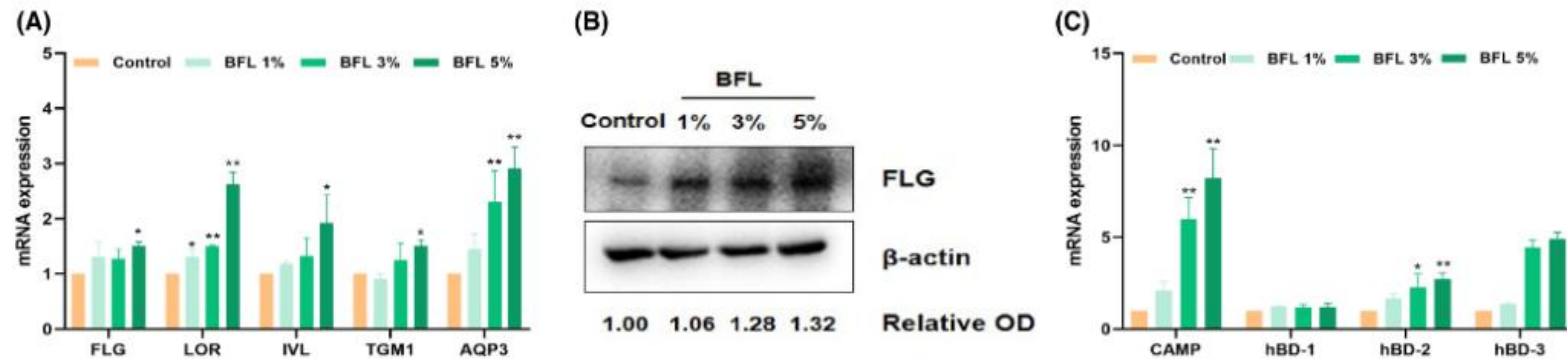


FIGURE 1 Effect of BFL on the expression of physical barrier-associated molecules and antimicrobial peptide genes in HaCaT cells by RT-PCR. HaCaT cells were treated with 1%, 3%, and 5% concentrations of BFL for 24 h. (A) Skin physical barrier genes-FLG, LOR, IVL, AQP3, and TGM1 mRNA expression levels. (B) Skin barrier molecule FLG protein expression level. (C) Skin antimicrobial peptide genes- CAMP, hBD-1, hBD-2, and hBD-3 mRNA expression levels. Data are shown as mean \pm standard deviation (n=3). *p<0.05, **p<0.01

Filaggrin, loricrin (LOR), involucrin (IVL), transglutaminase 1 (TGM1), and aquaporin 3 (AQP3) genes are important to maintain skin barrier function. The mRNA expression levels of FLG, LOR, IVL, and AQP3 genes expression were increased in a dose-dependent manner following BFL treatment at the various concentrations (Figure 1A). The expression of FLG protein in HaCaT cells was determined as well. BFL treatment also dose-dependently augmented FLG protein levels (Figure 1B). Cathelicidin (CAMP) and β -defensin (hBD-1, hBD-2, hBD-3) are the main AMPs in the epidermis that has the function of antibacterial and skin barrier maintenance. The results showed that the mRNA expressions of CAMP and hBD-2 in HaCaT cells were significantly increased after treating with different concentrations of BFL, while the enhancement of hBD-1 and hBD-3 mRNA levels was not significant (Figure 1C). These results suggested that BFL might promote the skin barrier maintenance function by up-regulating the expression of skin physical and antimicrobial barrier-related molecules in HaCaT cells.

Efficacy – Literature Data

The effects of *Bifida Ferment Lysate*

< Anti-oxidative effect >

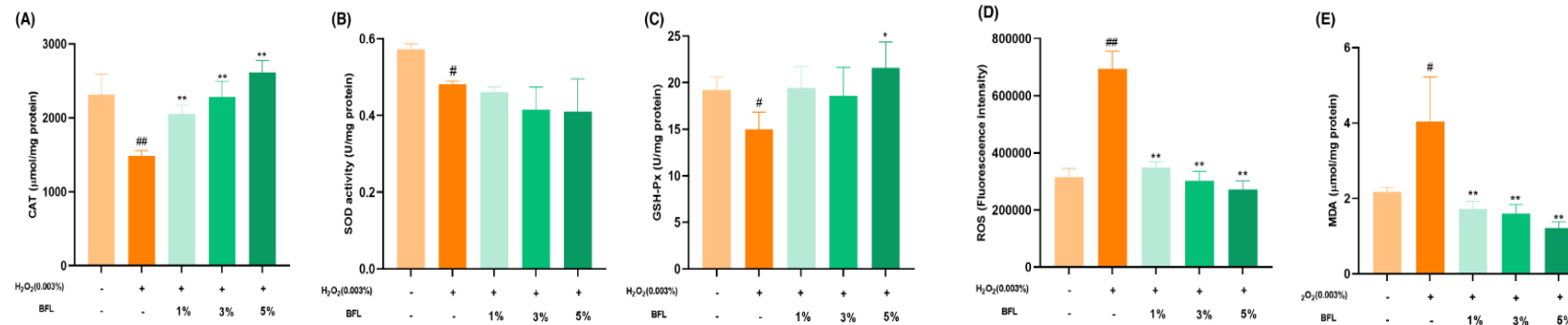


FIGURE 3 Antioxidant capacity of BFL on HaCaT cells. Effect of BFL on increasing the antioxidant enzymes (A) CAT, (B) SOD, and (C) GSH- Px, and decreasing (D) ROS content and (E) MDA in H₂O₂- stimulated HaCaT cells. Data are shown as mean ± SD (n= 3). *p< 0.05 and **p< 0.01 indicate significant differences compared with the H₂O₂ stimulation group; #p< 0.05 and ##p< 0.01 indicate significant differences compared with the control group

After treating with 0.003% H₂O₂, the antioxidant activities of CAT, SOD, and GSH- Px were significantly decreased while the intracellular ROS and MDA contents were increased in HaCaT cells, indicating that an oxidative damage cell model was successfully established. Cells exposed to BFL exhibited significantly (p< 0.05) raised CAT and GSH- Px activities and inhibitory effects on H₂O₂- induced ROS and MDA production in a dose-dependent manner (Figure 3B- F). **These findings revealed that BFL protected HaCaT cells by suppressing the ROS and MDA produced in response to H₂O₂ exposure, thus the antioxidant capacity of cells was improved.**

Efficacy – Literature Data

The effects of *Bifida Ferment Lysate*

< Anti-inflammatory effect >

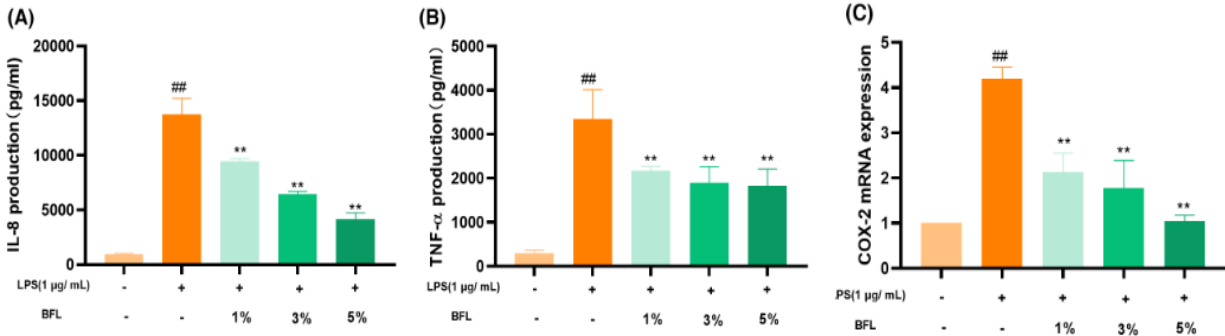


FIGURE 4 Anti-inflammatory effect of BFL on THP-1 macrophages. The production of (A) IL-8 and (B) TNF- α was quantified by ELISA, and (C) COX-2 mRNA expression was detected by RT-PCR. Data are shown as mean \pm standard deviation (n= 3). **p< 0.01 indicates significant differences compared with the LPS stimulation group; ##p< 0.01 indicates significant differences compared with the control group.

As shown in Figure 4A,B, the cytokine secretion levels of IL-8 and TNF- α , and the mRNA expression level of cyclooxygenase-2 (COX-2) in THP-1 macrophages were dramatically increased after LPS stimulation ($p < 0.01$), which suggested that the inflammatory cell model was successfully established. Compared with the LPS stimulation group, BFL significantly inhibited IL-8 and TNF- α production in THP-1 macrophages ($p < 0.01$). In accordance with the cytokine secretion, COX-2 mRNA expression in LPS-stimulated THP-1 macrophages were significantly decreased after treatment with different concentrations of BFL.

Information on use

Specifications

Appearance	Slightly yellow to yellow liquid
Odour	Characteristic
pH	4.5 – 7.5
Preservatives	1,2-Hexanediol

Formulation

Recommended Use Level, %	5.0 – 90.0
Incorporation	Add into aqueous phase at any temperature
Stability	High or low temperatures do not affect its stability.

BIFIDA FERMENT
LYSATE
PRODUCTS

ESTÉE LAUDER

ADVANCED NIGHT REPAIR EYE CONCENTRATE

Product Claims:

- Skin feels firmer, and nourished
- This ultra nourishing eye concentrate reduces the look of lines in every eye zone, and targets multiple eye area concerns

Ingredients: Water, Dimethicone, **Bifida Ferment Lysate**, Isohexadecane, Glycerin, Butylene Glycol, Bis-Peg-18 Methyl Ether Dimethyl Silane, Peg-10 Dimethicone, Distearidimonium Hectorite, Isopropyl Isostearate, Ppg-15 Stearyl Ether, Sucrose, Trehalose, Adansonia Digitata Seed Extract, Tripeptide-32, Yeast Extract\Faex\Extrait De Levure, Sodium Hyaluronate, Lactobacillus Ferment, Algae Extract, Sodium Rna, Hydrolyzed Algin, Caffeine, Hydroxyethyl Urea, Aminopropyl Ascorbyl Phosphate, Cucumis Sativus (Cucumber) Fruit Extract, Anthemis Nobilis (Chamomile) Flower Extract, Hordeum Vulgare (Barley) Extract\Extrait D'Orge, Silybum Marianum (Lady'S Thistle) Extract, Glycine Soja (Soybean) Seed Extract, Camelina Sativa Seed Oil, Sorbitol, Betula Alba (Birch) Extract, Scutellaria Baicalensis Root Extract, Morus Bombycis (Mulberry) Root Extract, Poria Cocos Sclerotium Extract, Tocopheryl Acetate, Propylene Glycol Dicaprate, Sodium Polyaspartate, Hydrogenated Lecithin, Phytosphingosine, Ethylhexylglycerin, Polysilicone-11, Isododecane, Helianthus Annuus (Sunflower) Seed Extract, Polyethylene, Propylene Carbonate, Polyacrylate Crosspolymer-6, Lecithin, Glucose, Fructose, T-Butyl Alcohol, Disodium Edta, Bht, Hydroxyacetophenone, Sodium Dehydroacetate, Potassium Sorbate, Phenoxyethanol, Iron Oxides (Ci 77491)



L'Oreal Paris

YOUTH CODE SKIN ACTIVATING FERMENT EYE ESSENCE

Product Claims:

- Extracted at **98% purity (concentration of Bifida Ferment Lysate)** to stimulate skin metabolism and accelerate cell renewal.
- Activates youthful skin with the renewing power of fermented seeds.

Ingredients: WATER, DIPROPYLENE GLYCOL, **BIFIDA FERMENT LYSATE**, ALCOHOL, GLYCERIN, BIS-PEG-18 METHYL ETHER DIMETHYL SILANE, VINYL DIMETHICONE/METHICONE SILSESQUIOXANE CROSSPOLYMER, PEG/PPG/POLYBUTYLENE GLYCOL-8/5/3 GLYCERIN, HYDROXYETHYLPIPERAZINE ETHANE SULFONIC ACID, PPG-3 MYRISTYL ETHER, PEG-32, STEARETH-20, PAPAIN, CARBOMER, TRIETHANOLAMINE, DIMETHICONE, DIMETHICONE CROSSPOLYMER, CAFFEINE, SODIUM HYALURONATE, SODIUM POLYACRYLATE, SALICYLOYL PHYTOSPHINGOSINE, PALMITOYL OLIGOPEPTIDE, PALMITOYL TETRAPEPTIDE-7, ALUMINUM STARCH OCTENYLSUCCINATE, ANANAS SATIVUS FRUIT EXTRACT / PINEAPPLE FRUIT EXTRACT, ADENOSINE, AMMONIUM POLYACRYLOYLDIMETHYL TAURATE, PROPANEDIOL, CAPRYLYL GLYCOL, XANTHAN GUM, T-BUTYL ALCOHOL, N-HYDROXYSUCCINIMIDE, CHRYSIN, BHT, POTASSIUM SORBATE, SODIUM BENZOATE, PHENOXYETHANOL, CHLORHEXIDINE DIGLUCONATE, CI 14700 / RED 4, CI 19140 / YELLOW 5



VICHY

NORMADERM PHYTOACTION ACNE CONTROL DAILY MOISTURIZER

Product Claims:

- Vichy's first acne treatment moisturizer
- Helps to clear acne and visibly improve skin tone and texture
- Visibly refines skin texture and improves skin tone over time

Ingredients: Water, glycerin, isononyl isononanoate, butylene glycol, kaolin, zinc sulfate, **bifida ferment lysate**, sodium hydroxide, sodium polyacrylate, sodium hyaluronate, sodium benzoate, phenoxyethanol, ascorbyl glucoside, hydrolyzed algin, trisodium ethylenediamine disuccinate, biosaccharide gum-1, acrylates / C10-30 alkylacrylate crosspolymer, fragrance



ma:nyo

BIFIDA AMPOULE MIST

Product Claims:

- Fortify that skin barrier! The Bifida Ampoule Mist has all of the benefits of an ampoule, rich with fermented extracts and peptides.
- Replenish fragile skin, Fortifies skin barrier, Hydrates the skin

Ingredients: Paeonia Lactiflora Root Extract, **Bifida Ferment Lysate (20%)**, Lactobacillus/Pumpkin Fruit Ferment Filtrate, Butylene Glycol, Glycerine, Sodium Hyaluronate, Lactobacillus / Soybean Ferment Extract , Phellinus Linteus Extract, Acetyl Hexapeptide-8, Aureobasidium Pullulans Ferment, Palmitoyl Dipeptide-10 Palmitoyl Tripeptide-1, Cortellus Shiitake (Mushroom) Extract Glycyrrhiza Glabra (Licorice) Root Extract, Trametes Versicolor Extract Copper Tripeptide-1, Allantoin, Panthenol, Physalis Alkekengi Fruit Extract Camellia Sinensis Leaf Extract, Camellia Sinensis Leaf Extract Epigallocatechin Gallate, Panax Ginseng Root Extract Panax Ginseng Root Extract, Algin Forsythia Suspensa Fruit Extract, Dioscorea Oppositifolia (Wild Yam) Root Extract Methyl Gluceth-20, Caffeine, Caprylyl Glycol, Scutellaria Baicalensis Root Extract, Illicium Verum (Anise) Fruit Extract, Adenosine





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