Specification

INCI Name	Hydrolyzed Sodium Hyaluronate
Molecular weight	≤5000 Da
Recommended dosage	0.05%~0.5%
Usage	Soluble in water, can be added directly into the water phase.
Application	microHA™ can be added in soothing, repairing products, such as skin care

Reference Formula

Hyaluronic acid soothing & regenerating cream		
	INCI Name	wt%
A	Cetearyl Alcohol/Cetearyl Glucoside	3.0
	Simmondsia Chinensis (Jojoba) Seed Oil	2.0
	Butyrospermum ParkII (Shea Butter)	2.0
	Tocopheryl Acetate	0.5
	Squalane	2.0
	Dicaprylyl Carbonate	2.0
	Caprylic/Capric Triglyceride	6.0
	Cyclomethicone	2.0
B	Butylene Glycol	4.0
	Glycerin	4.0
	Sodium Hyaluronate (HA-T)	0.05-0.1
	Ammonium Acryloyldimethyltaurate/ Beheneth-25 Methacrylate Crosspolymer	0.3
	Aqua	to 100
	Hydrolyzed Sodium Hyaluronate (microHA™)	0.1-0.2
C	Phenoxyethanol/ Ethylhexylglycerin	0.8
	Fragrance	0.1

Hyaluronic acid soothing & repairing gel		
	INCI Name	wt%
A	Aqua	to 100
	Betaine	1.0
	Sodium Hyaluronate (HA-T)	0.1
	Butylene Glycol	3.0
	Glycerin	3.0
B	Acrylates/C10-30 Alkyl Acrylate Crosspolymer (Carbopol Ultrez 21)	0.5
	Aqua	5.0
C	Aminomethyl Propanol	0.25
D	Glyceryl/Glyceryl Acrylate/Acrylic Acid Copolymer/Propanediol/PVM/MA Copolymer	2.0
	Hydrolyzed Sodium Hyaluronate (microHA™)	0.1-0.2
	Panthenol	0.5
	Hexylene Glycol	1.5
	Ethylhexylglycerin	0.1

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The Science of Beauty

华熙生物
BLOOMAGE BIOTECH

Anti-inflammatory & Repairing

microHA™

Super Active Hyaluronic Acid

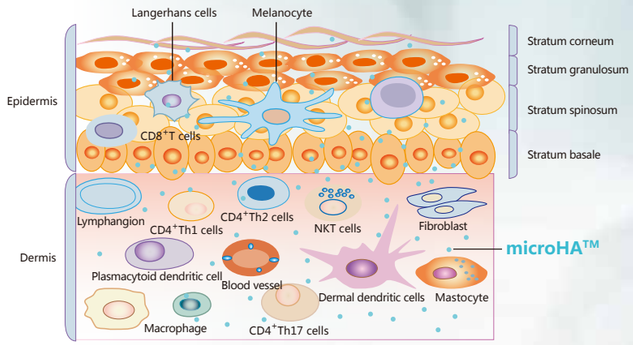
Inhibit the release of inflammatory cytokines and scavenges free radicals

Repair skin cell damage and accelerates tissue healing

Promote keratinocytes proliferation and enhances skin barrier function

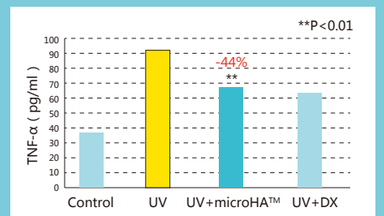
microHA™
Super Active Hyaluronic Acid

microHA™ is a super active HA produced by a patented enzymatic degradation technology with superb biological activity. microHA™ can quickly penetrate epidermis and dermis to scavenge free radicals, reduce inflammation factor activity, repair damaged cells, protect the skin against inflammation and sensitivity caused by various stimulus.



microHA™-Anti-inflammation

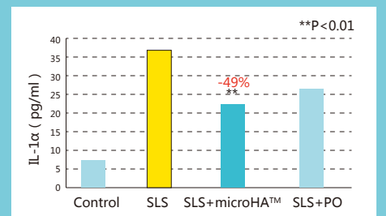
1 Inhibition of TNF-α release



Compared to the positive control group (+UV), microHA™ can significantly reduce the release of inflammatory factors (TNF-α) ($p<0.01$); the inhibition rate is as high as 44%. The inhibition effect of 0.125% microHA™ was comparable to that of 0.01% dexamethasone.

microHA™ (0.125% , m/V) , Dexamethasone (DX, 0.01%, m/V) , test model: "UVB-kertinocytes"
Tested by Guangdong BioCell Biotechnology Co. Ltd.

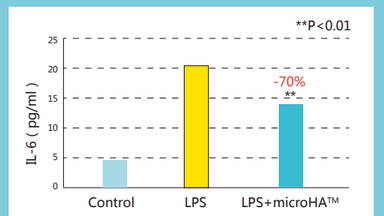
2 Inhibition of IL-1α release



Compared to SLS group, microHA™ can significantly reduce IL-1α release level ($p<0.01$); the inhibition rate is as high as 49%. Moreover, the inhibition effect on IL-1α was better than 0.3% PO.

microHA™ (0.125% , m/v) , Portulaca Oleracea Extract (PO, 0.3% , m/v) , test model: "SLS-Epikutis"
Tested by Guangdong BioCell Biotechnology Co. Ltd.

3 Inhibition of IL-6 release



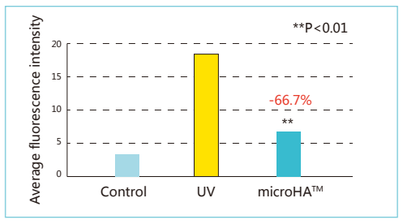
Compared to LPS (Lipopolysaccharide) group, microHA™ can significantly reduce IL-6 release level ($p<0.01$); the inhibition rate is as high as 70%.

microHA™ (0.4% , m/v) , test model: "LPS-Balbc 3T3"

microHA™-Repairing

1 Scavenging oxygen free radicals

When stimulated, the skin cells produce large amount of oxygen free radicals, causing inflammation, thus resulting in skin damage and color spots. microHA™ can effectively remove the UV-induced reactive oxygen free radicals and reduce the inflammatory response. microHA™ could reduce the average fluorescence intensity by 66.7% .

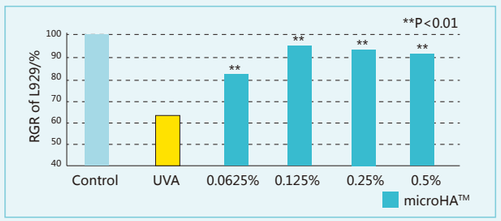


microHA™ (0.1% , m/m) , test model: "UVA-L929"

2 UV-damaged repairing

Repairing UVA-damaged fibroblast cells

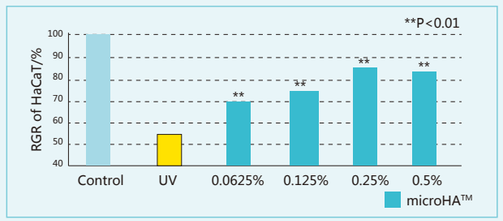
Results show that after UVA irradiation, RGR (relative growth rate) of L929 cells fell to 63%. With the addition of microHA™, the cell proliferation rate increased significantly; 0.125% microHA™ can make the cell proliferation rate increase up to 94%.



microHA™ (0.0625%-0.5% , m/m) , test model: "UVA-L929"

Repairing UV-damaged keratinocytes

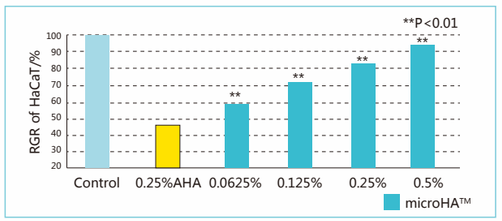
Results show that after UVA&UVB irradiation, RGR of HaCat cells fell to 54%. With the addition of microHA™, the cell proliferation rate increased significantly; 0.25% microHA™ can make the cell proliferation rate increase up to 84.7%.



microHA™ (0.0625%-0.5% , m/m) , test model: "UV-HaCaT"

3 Chemical damage repairing

Results show that after AHA irradiation, RGR of HaCaT cells fell to 46%. With the addition of microHA™, the cell proliferation rate increased significantly; 0.5% microHA™ can make the cell proliferation rate increase up to 95%.



microHA™ (0.0625%-0.5% , m/m) , test model: "AHA-HaCaT"