



bioactive salicylates from nature

Actera

**Salixin** is an active ingredient from organically grown and sustainable Danish purple willow. The willow bark is fermented in water using traditional Nordic fermentation practices.

The resulting bioactive compounds are high in natural salicylates offering superb anti-microbial, anti-inflammatory, and additional biological benefits.

The positive impact of these actives on health and beauty is experienced in several personal care applications, most notably on scalp health (dandruff), oral care (healthy gums), and in the treatment of atopic dermatitis.

## INCI

Lactobacillus/Salix Purpurea Bark Ferment Extract  
(and) Glycerin

## Applications

- Scalp treatments
- Dandruff shampoo
- Atopic skin care
- Calming skin treatments
- Oral rinses
- Toothpaste

## Key Benefits

- Clinically reduces dandruff, itching, & flaking
- Clinically reduces bleeding & inflamed gums
- Reduces inflammatory biomarkers in skin cells, and reduces TEWL in clinical skincare testing
- Soothes irritated and atopic skin

## Formulation Guidelines

Hair Care: 2%  
Oral Care: 3%  
Skin Care: 1-2%





## Bioactive Rationale

Salicylates are the original pharmaceutical active, with similarities to its close cousin, aspirin. From ancient times Hippocrates reported on willow's pain-relieving properties, and since then the historical record is filled with reports of its use in treatments for digestion, menstruation, skin diseases, and weight loss.

**Salixin** takes these health benefits to the next level through traditional fermentation processes that concentrate and transform the willow extract into untold beneficial molecules. The product is entirely from certified organic agriculture, sustained through healthy farming practices resulting in abundant bioactivity.

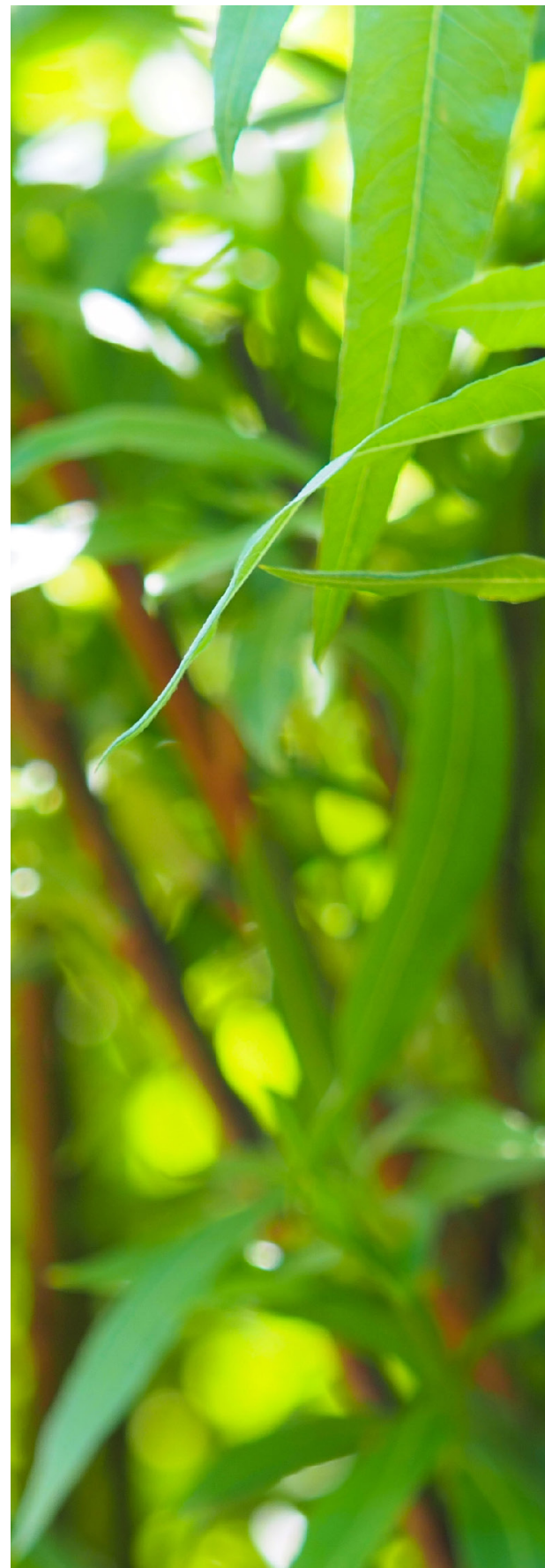
The final ingredient produced is 100% natural, yet truly active in healing treating topical conditions.

## Salixin Sustainability

Salixin is organically and sustainably produced using a unique no-waste process. Waste material collected after fermentation is upcycled into compost which is leveraged to replace peat moss in agriculture and horticulture applications.

This helps reduce the CO<sub>2</sub> burden in the atmosphere because peatlands are vital in capturing and holding CO<sub>2</sub>. They hold around 30% of the globe's soil carbon.

Harvesting peatlands to make peat moss releases centuries of stored carbon into the atmosphere, so finding alternatives, like willow compost, is hugely beneficial for planet health.



## Advanced Clinical Study on Dandruff Sufferers

### Design

- 21 subjects with dandruff (male and female)
- 8 weeks
- 2% Salixin shampoo
- Clinical photography
- Trichologist grading
- Self-assessment questionnaire



Visibly reduces  
dandruff



Soothes  
itching



Improves  
scalp comfort

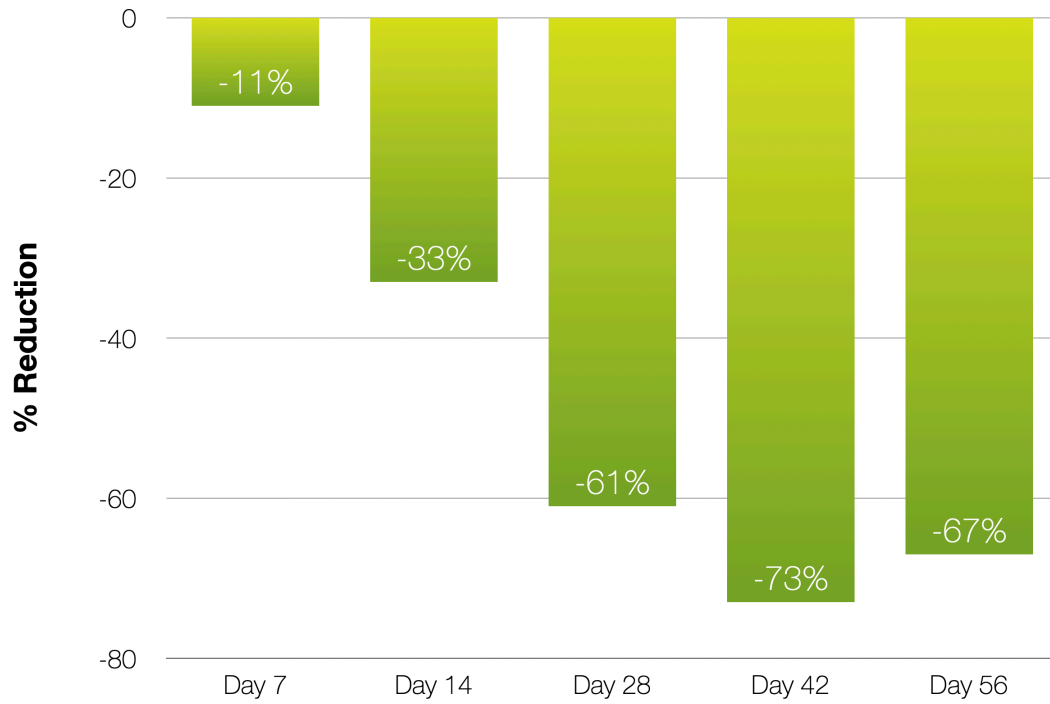


Nourishes  
the scalp

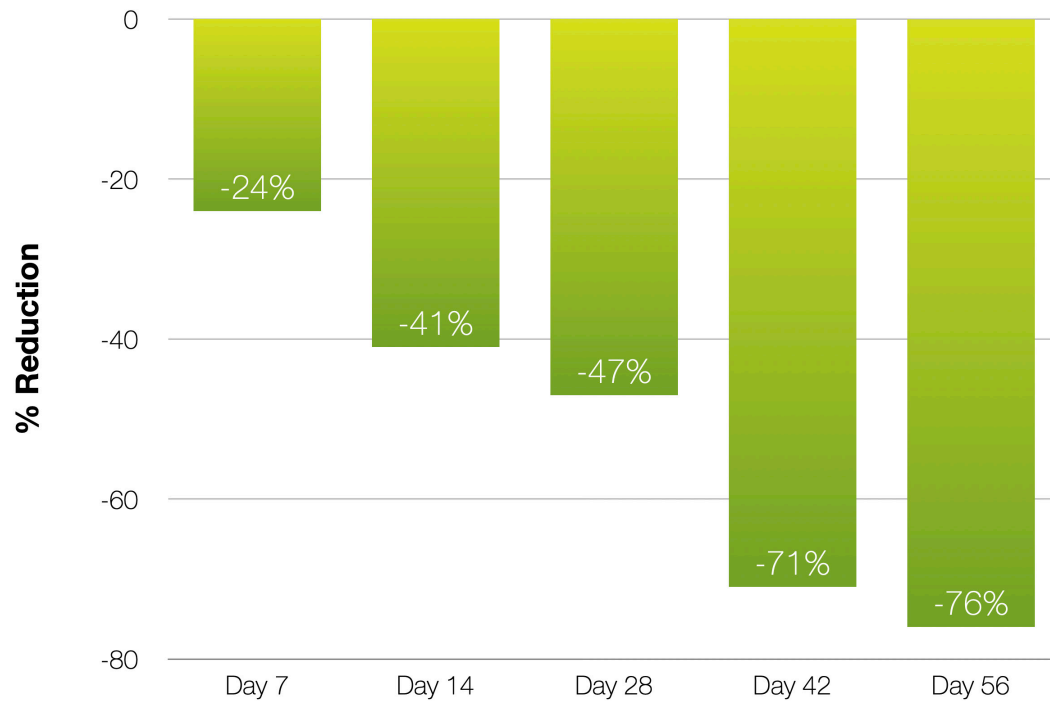


Refreshes  
the scalp

Reduction of dandruff over 8 weeks  
(2% Salixin shampoo)



Reduction of dandruff over 8 weeks  
(4% Salixin shampoo)



*\*more rapid improvement with 4% use level*

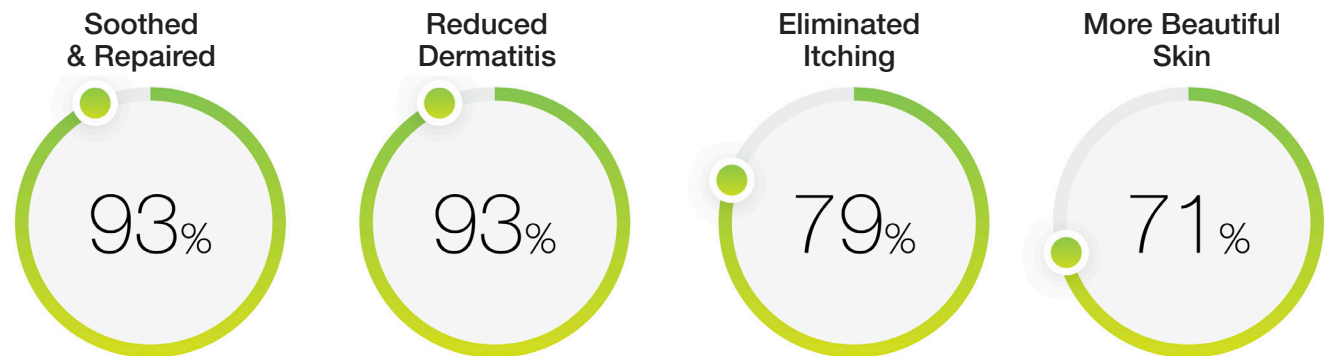
## Healthier Teeth & Gums

A 3% Salixin mouth wash, twice per day on 15 adult subject for 28 days.  
The results show significantly healthier gums:



## Skin Soothing & Dermatitis Reduction

In-Vivo Test on Atopic Skin • 28 days • 14 people • 2% Salixin lotion • Self-Assessment

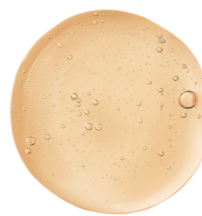


- Improves the skin barrier's quality (-26% TEWL)
- Tends to improve the skin rosy aspect



# Actera

clean + active



## Scalp Rescue Shampoo

Formulation #10-136

This calming shampoo, powered by bioactive salicylates from **Salixin®**, is clinically proven to reduce redness, irritation, and flaking. Sustainably sourced from Danish Purple Willow, **Salixin®** soothes and relieves the scalp with its superior anti-inflammatory and anti-microbial properties.

Phase	INCI	Trade Name	%
A	Deionized Water		Q.S.
	Polyquaternium-10		0.1
B	Caprylyl Glyceryl Ether (and) Caprylhydroxamic Acid (and) Propanediol	<b>TeraStat™ N</b>	2.0
C	Cocamidopropyl Hydroxysultaine (and) Sodium Cocoampho hydroxypropylsulfonate (and) Cocamide DIPA (and) Maltodextrin Laurate <sup>1</sup>		30.0
	Sodium Cocoyl Glutamate <sup>2</sup>		15.0
	Lactobacillus/Salix Purpurea Bark Ferment Extract (and) Glycerin	<b>Salixin®</b>	2.0
E	Citric Acid 50% Solution		QS pH ~5.75
F	Sodium Chloride		1.00
		Total	100.0

### Procedure

1. Charge water to main vessel. Slowly disperse the powder under high shear propeller mixing until uniform and clump free.
2. Disperse Phase B into Phase A. Mix until uniform.
3. Add 1/3 of Phase C to Phase AB while mixing. Mix under low shear until uniform.
4. Heat Phase ABC to 80°C with gentle swirling at 10-15 minute increments to ensure even heating. Hold temp at 80°C for ~15 minutes.
5. Remove from heat and continue mixing under low shear until at ~50°C. Add remaining 2/3 of Phase C to the main vessel and mix until uniform.
5. Add Phase D to Phase ABC at or below 40°C. Mix until uniform.
6. Adjust pH using Phase E. Mix for 5 minutes.
7. Add Phase F to Phase ABCDE. Mix for at least 30 minutes.

### Physical Properties

pH = 5.90      Viscosity = 3,270 cP      Appearance: Translucent amber gel

### Stability

Passed 12 weeks at RT and 40°C and 3 cycles F/T

### Use Instructions

Massage onto wet scalp and hair. Rinse well with water.

### Intended packaging

Pump, tube, bottle

1. Dexterra® Cleanse
2. Glutamix™ A-50

# Actera

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