bridge farm

BIOSCIENCE

Harnessing nature through science

Personal Care Ingredients





About Bridge Farm Bioscience

From plant science to commercial production

Bridge Farm Bioscience combines decades of horticultural expertise with advanced plant science to develop and manufacture high-quality, plant-derived ingredients for the personal care industry.

From our integrated UK facility in Lincolnshire, our teams work across cultivation, extraction, analytical testing, product development and commercial manufacture.

This connected capability supports greater transparency, traceability and consistency as ingredients progress from early research through to scalable production.

Since 1988
Decades of horticultural expertise

60+ acres
of glasshouse space

£10m+
Invested in bioscience growth

Integrated capability
Cultivation | Extraction
Testing | Manufacture

01. Botanical preparation

02. Controlled CO_2 extraction

03. Separation

04. Refinement and quality testing

Supercritical CO_2 Extraction

Precision extraction, designed around the plant

Supercritical CO_2 extraction is central to how we transform carefully selected botanical materials into high-value personal care ingredients.

Under controlled temperature and pressure, CO_2 enters a supercritical state, allowing it to move through the plant material and selectively extract targeted oil-soluble compounds. When the pressure is reduced, the CO_2 seperates from the recovered extract, enabling the extraction stage to operate without added conventional organic solvents.

By tailoring the operating conditions to each botanical and target compound, we can achieve selective recovery while limited exposure to high processing temperatures. Where required, the resulting extract is then refined, purified and analytically tested to meet its defined specification.

The result is a precise and adaptable process that delivers consistent, traceable ingredients for high-performance personal care formulations.

Why Supercritical CO_2?

Selective
Conditions tailored to recover targeted plant compounds.

Controlled
Moderate temperatures help limit exposure to excessive heat.

CO_2 Based
Extraction without added conventional organic solvents.

Verified
Refined where required and tested to specification.



Retinol-like results, with a gentler touch

Lifolia® is our high-purity, COSMOS-approved, plant-derived bakuchiol, a gentle alternative to retinol offering anti-ageing, antioxidant and skin-soothing benefits.

Key Benefits

Visible Results

Helps visibly reduce fine lines, wrinkles and uneven pigmentation for smoother, more even-looking skin.

Retinol-Like

Delivers visible benefits comparable to retinol, with less reported scaling and stinging.

Skin Resilience

Helps support collagen and fibronectin, key components of the skin's structure and resilience.

Antioxidant & Soothing

Helps defend against oxidative stress while supporting calmer, healthier-looking skin.

Published Clinical Evidence

In a randomised, double-blind, 12-week study involving 44 participants, a cream containing 0.5% bakuchiol applied twice daily significantly reduced wrinkle surface area and hyperpigmentation.

The results were not statistically different from those achieved with a cream containing 0.5% retinol applied once daily. However, participants using retinol reported more facial scaling and stinging.

Technical Information

INCI: Bakuchiol
Origin: Psoralea corylifolia seed
Appearance: Light yellow to amber liquid
Purity: >99% bakuchiol; <5 ppm total psoralens
Recommended inclusion level: 0.5–1%

Produced at Bridge Farm's UK facility using supercritical CO_2 extraction and analytically tested against a defined specification.

Scientific and technical references are available on request.



Saptonica® | Sapienic Acid

Microbiome-concious care, inspired by human sebum

Saptonica® is our high-purity, COSMOS-approved, sapienic acid, purified from the supercritical CO_2 extract of Thunbergia alata seed. A characteristic fatty acid of human sebum, sapienic acid offers a distinctive approach to microbiome-conscious, purifying and skin-comfort formulations.

Key Benefits

Natural Defences

Helps support the skin's natural defence against selected unwanted bacteria.

Microbiome-Friendly

At 0.5%, Saptonica® caused no notable change in the tested skin and scalp microbial communities after four hours.

Selective Support

At 1–2%, Saptonica® shifted the tested skin model towards *S. epidermidis* and away from *S. aureus*.

Skin Comfort

Laboratory research supports sapienic acid's anti-inflammatory potential in comfort-focused formulations.

In Vitro Microbiome Testing

In four-hour co-culture testing, 0.5% Saptonica® caused no notable change in the community composition of the representative microorganisms in the tested skin and scalp models.

In a four-organism skin model, 1% and 2% Saptonica shifted relative abundance towards *S. epidermidis* and away from *S. aureus*.

Technical Information

INCI: Hexadecenoic acid
Origin: Thunbergia alata seed
Appearance: Clear, colourless liquid
Purity: >95% sapienic acid
Recommended inclusion level: 0.5–20%

SOIL ASSOCIATION APPROVED
COSMOS APPROVED

Produced at Bridge Farm's UK facility by purifying the supercritical CO_2 extract of Thunbergia alata seed and analytically tested against a defined specification.

Scientific and technical references are available on request.



Rosalica® | Rosemary Leaf Extract

Concentrated Rosemary for Advanced Skincare

Rosalica® is our COSMOS-approved rosemary leaf extract, standardised to more than 85% pentacyclic triterpenoids, including 48–55% ursolic acid. It offers barrier, soothing, antioxidant and purifying support for skincare formulations.

Key Benefits

Barrier Support

Supports epidermal ceramides and skin-barrier recovery for smoother, more resilient-looking skin.

Calm & Comfort

Rosemary triterpenoids help soothe and comfort environmentally stressed skin.

Antioxidant Defence

Helps defend against oxidative stress for a healthy, youthful-looking complexion.

Purifying Support

Rosemary-derived triterpenoids offer purifying support for clarifying skincare formulations.

Published Research

Experimental research found that ursolic and oleanolic acids supported skin-barrier recovery and markers associated with healthy keratinocyte differentiation. Liposome-encapsulated ursolic acid also increased ceramide levels in cultured human epidermal cells.

Ursolic acid has reduced UV-induced oxidative stress and inflammatory signalling in human skin-cell models. Rosemary triterpenoids have also demonstrated topical anti-inflammatory and antibacterial activity in experimental studies.

Technical Information

INCI: Rosmarinus Officinalis Leaf Extract
Origin: Dried rosemary leaves
Appearance: Off-white to cream powder
Purity: 48-55% Ursolic acid
Recommended inclusion level: 0.5–5%

SOIL ASSOCIATION APPROVED
COSMOS APPROVED

Produced at Bridge Farm's UK facility using supercritical CO_2 extraction

Scientific and technical references are available on request.



Selenica® | Petroselinic Acid

Targeted Skin Support from Coriander

Selenica® is our COSMOS-approved, high-purity petroselinic acid, derived from coriander seed. This distinctive plant-based omega-12 fatty acid offers soothing, skin-resilience, purifying and topical-delivery potential for advanced skincare formulations.

Key Benefits

Soothing Support

Demonstrated anti-irritancy activity supports formulations designed to soothe and comfort the skin.

Skin Resilience

Supports decorin pathways associated with firm, resilient-looking skin.

Purifying Action

Demonstrated anti-biofilm activity against Staphylococcus aureus supports clarifying skincare concepts.

Enhanced Delivery

Its interaction with skin lipids offers potential for advanced topical-delivery formulations.

Laboratory Evidence

Laboratory testing found that petroselinic acid reduced an inflammatory mediator and improved keratinocyte viability following exposure to an irritant. The same research found increased decorin levels in cultured human dermal fibroblasts.

A peer-reviewed study found that petroselinic acid inhibited *S. aureus* biofilm formation by more than 65% at 100 µg/mL and reduced several virulence factors. Separate research has examined its potential as a skin-penetration enhancer. These findings relate to isolated petroselinic acid rather than Selenica® itself.

Technical Information

INCI: Petroselinic Acid
Origin: Coriandrum sativum seed
Appearance: White crystaline solid
Purity: >95% petroselinic acid
Recommended inclusion level: 0.5–2%

SOIL ASSOCIATION APPROVED
COSMOS APPROVED

Produced at Bridge Farm's UK facility from coriander seed using supercritical CO_2 extraction.

Scientific and technical references are available on request.



Alata-O® | Thunbergia Alata Seed Oil

Sapienic-Rich Botanical Oil for Skin Conditioning

Alata-O® is our COSMOS-approved Thunbergia alata seed oil, with a triglyceride fatty-acid profile containing more than 80% sapienic acid. It offers emollient, skin-conditioning, antimicrobial and skin-comfort potential for personal care formulations.

Key Benefits

Sebum-Inspired Profile

Naturally rich in sapienic acid, a distinctive fatty acid found in human sebum.

Emollient Conditioning

Its sapienic-rich triglyceride profile helps leave skin feeling soft, smooth and conditioned.

Natural Defences

Sapienic acid forms part of the skin's natural antimicrobial defence, with activity against selected Gram-positive bacteria.

Skin Comfort

Laboratory research supports the anti-inflammatory potential of sapienic acid and its esters.

Published Research

Published analysis identified sapienic acid as the principal fatty acid in Thunbergia alata seed oil. Patent literature also describes Thunbergia alata oil and sapienic triglycerides as emollient lipids associated with skin suppleness and moisture conservation.

Sapienic acid has demonstrated activity against selected Gram-positive bacteria, including Staphylococcus aureus. In a small exploratory study, topical free sapienic acid reduced elevated S. aureus counts in six of eight participants, while separate cellular research reported anti-inflammatory activity. These studies relate to sapienic acid or its esters rather than Alata-O® itself.

Technical Information

INCI: Thunbergia Alata Seed Oil
Origin: Thunbergia alata seed
Appearance: Clear, colourless to yellow liquid
Sapienic acid content: >80% of triglyceride fatty-acid profile
Recommended inclusion level: Below 20%
Solubility: Oil soluble

SOIL ASSOCIATION APPROVED
COSMOS APPROVED

Produced at Bridge Farm's UK facility from milled Thunbergia alata seeds using food-grade supercritical CO_2 extraction.

Scientific and technical references are available on request.

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Let's talk about your next formulation

Discover our range of UK-produced, COSMOS-approved botanical ingredients for personal care.

Speak to our team about samples, technical documentation, formulation requirements and commercial enquiries.

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Product information is provided for professional use. Customers are responsible for assessing ingredient suitability and ensuring the safety and regulatory compliance of finished formulations.