

Marian-RSO

Plant part: Aerial Parts

Scientific name: *Silybum marianum*

INCI name: Silybum Marianum Extract

IECIC 2015 name: SILYBUM MARIANUM EXTRACT





Marian-RSO

Product Name: Marian-RSO

Plant Name: Milk Thistle

Milk thistle (*Silybum marianum*) is a thorny plant that originates from mountains of the Mediterranean region, where it can grow up to 200 cm tall and is recognised by its spiny leaves, milk-white veins and purple to pink flowers.

It has a long historic use as an herbal medicine during the Roman times, mostly for hepatoprotective effects.

The thistle has been used as the official emblem of Scotland since the 15th century.



Historically, thistle has been used as a food and in herbal medicine, mostly for the liver. Yet more recent studies have shown milk thistle to be useful in treating cutaneous wounds via its antioxidation and anti-inflammatory effects.

Antioxidant effects of silymarin have been broadly studied. One of the active compounds that acts as an antioxidant in milk thistle is silymarin, a polyphonic flavonoid. In addition, there is increasing evidence that the thistle can help protect skin from UV damage and assist in the repair of sun-damaged skin by inhibiting the infiltration of leukocytes and myeloperoxidase activity.

[1] Milk thistle (*Silybum marianum*): a review, Kaur et al., IJPrd, 2011, 3(2), p.1-10

[2] Treatment of silymarin (milk thistle), a plant flavonoid, prevents ultra-violet-induced immune suppression and oxidative stress in mouse skin, Katiyar et al, Int J Oncol, 2002, 21(6), p.1213-1222

The Secrets of Caledonia

RSMCT™

Our unique **RSMCT™** contains the properties of an effective solvent and skin-conditioning agent which makes it an excellent carrier oil for our herbal infusions.

The rapeseed oil that we use is produced at Carrington Barns, a local family-run farm just 8 miles south of Edinburgh. The rapeseed is grown at the farm, then cold-pressed to maintain its nutrition and the stability of actives, such as antioxidant molecules.



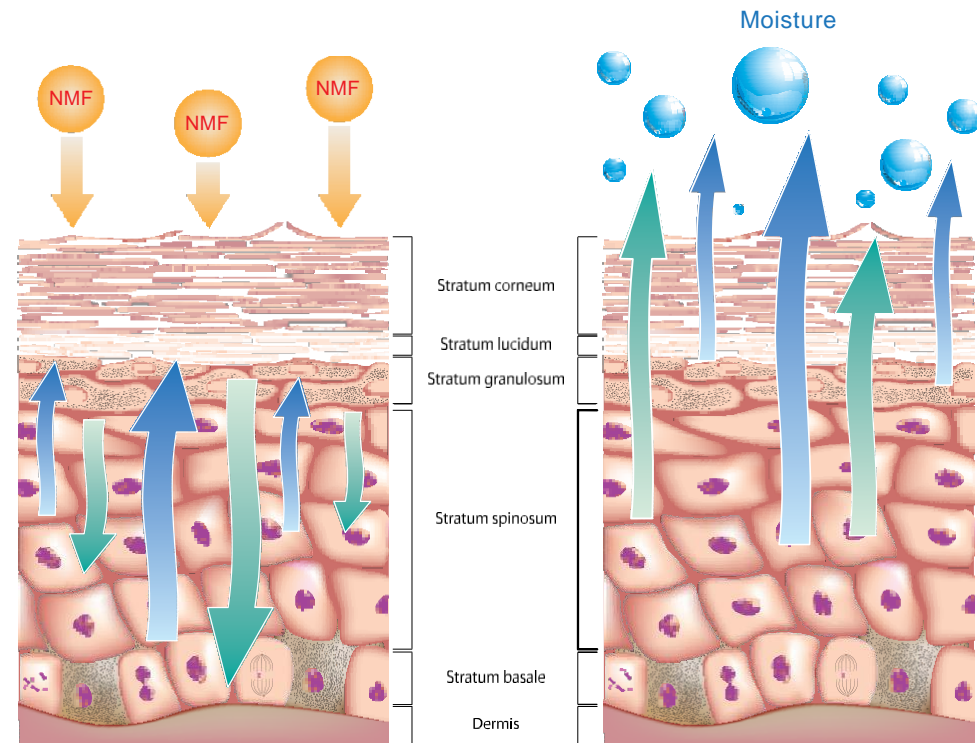
Benefits of RSMCT™:

- Extracts, carries and transports oil soluble active components.
- Enhances penetration, the active constituent is absorbed through the skin.
- Provides a persistent long-lasting protective barrier.
- Forms part of the oil phase.
- Solvent for oil dispersible material.

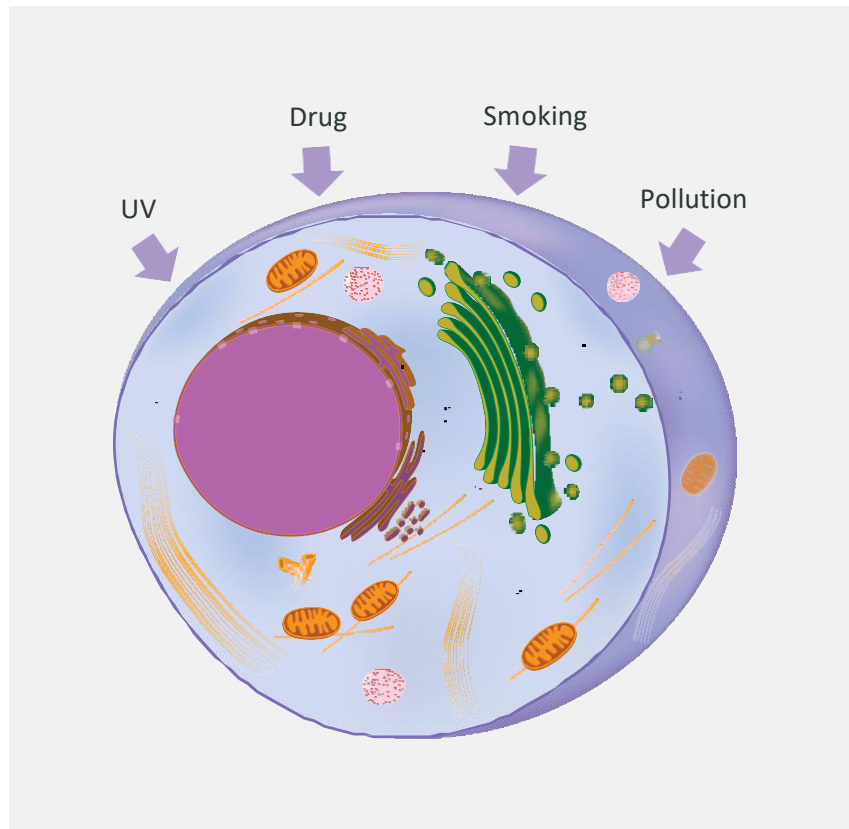
Since 1852
Carrington Farm

Skin Structure

The retention of water in the Stratum corneum (SC) is dependent on two major components: (1) the presence of natural hygroscopic agents within the corneocytes (collectively referred to as natural moisturizing factor) and (2) the SC intercellular lipids orderly arranged to form a barrier to transepidermal water loss (TEWL). The water content of the SC is necessary for proper SC maturation and skin desquamation. Increased TEWL impairs enzymatic functions required for normal desquamation resulting in the visible appearance of dry, flaky skin.



Antioxidants

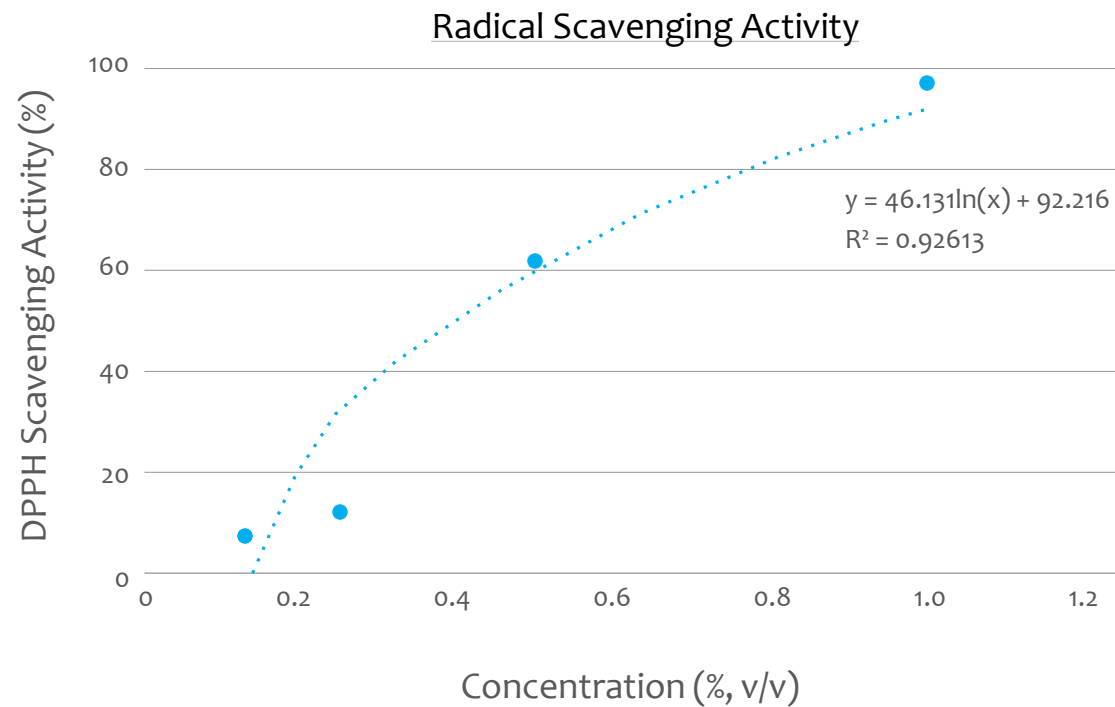


Why are they important?

Our skin is under attack from many factors in daily life, such as UV, pollution and smoking. These factors increase the Reactive Oxygen Species (ROS).

Antioxidants from Milk Thistle Extract can inhibit the generation of ROS and in turn inhibit cellular damage.

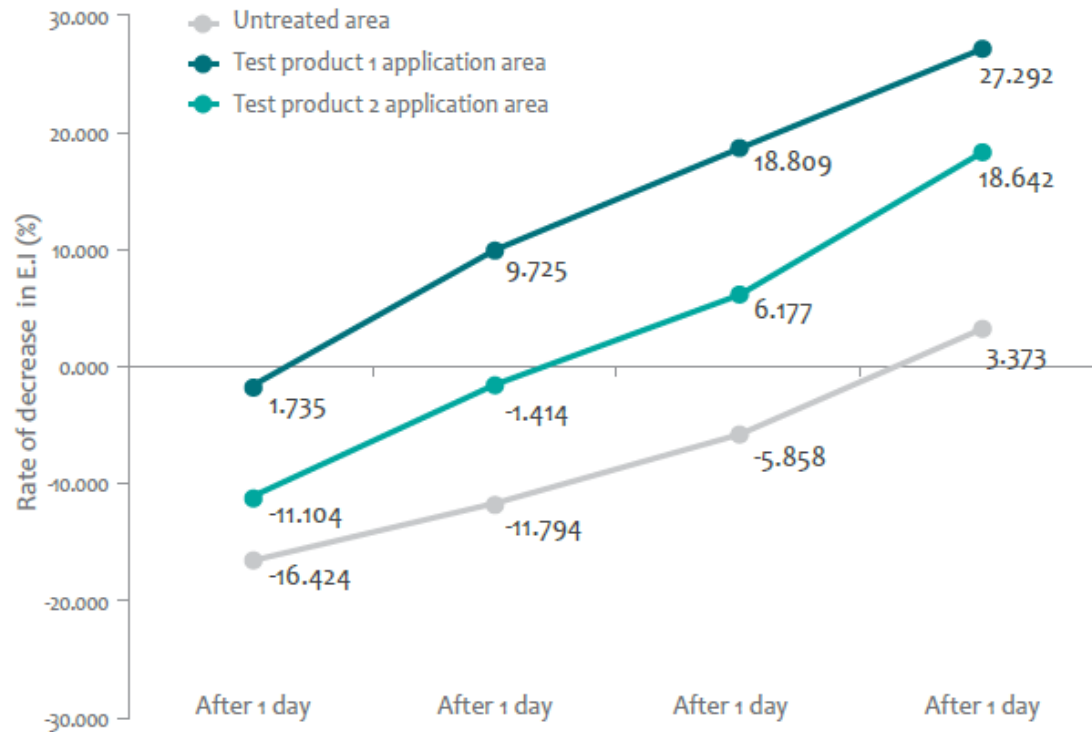
Antioxidant Effects of Marian in RSMCT™



SC₅₀: 0.4%

In our test, 0.4% of Marian-RSO was enough to remove 50% of free radicals. Good antioxidant activity is critical for anti-ageing agents in skin care products.

Soothing Effects of *Marian (in vivo)*



On Day 0, patches containing 1% SLS solution were applied for 24 hours to induce erythema onto the forearms of 21 female volunteers aged between 20-55.

A cream containing Marian and Marian-RSO (Product 1) and diluted solution of Marian (Product 2) was applied to the irritated skin for 14 days.

Reported functions

Ingredient : SILYBUM MARIANUM EXTRACT

INCI Name	SILYBUM MARIANUM EXTRACT
Description	Silybum Marianum Extract is an extract of the seeds and leaves of the Lady's Thistle, Silybum marianum (L.), Asteraceae
INN Name	
Ph. Eur. Name	
CAS #	84604-20-6
EC #	283-298-7
Chemical/IUPAC Name	
Cosmetic Restriction	
Other Restriction(s)	
Functions	<ul style="list-style-type: none"> • SKIN CONDITIONING
SCCS opinions	
Identified INGREDIENTS or substances e.g.	

Source: European Commission [http://ec.europa.eu/growth/tools-databases/cosing/index.cfm?fuseaction=search.details_v2&id=37708]

Product Information

Product Name : Marian-RSO

INCI name : Silybum Marianum Extract
(China Compliant)

Dosage : 1 – 3%

Formulation : Add to the formulation
when the temperature is lower than 55°C.
Recommended to add after the cooling process.

Storage : Avoid direct light or UV.
Keep it in a cool and dry area.





The Secrets of Caledonia

The Secrets of Caledonia (TSOC) is a supplier of natural cosmetic ingredients inspired by Scottish traditional herbal medicine. Taking advantage of Scotland's biodiversity and working in collaboration with established Scottish herbalists, we aim to provide the most effective and innovative natural ingredients at the highest quality.



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