

**TECH OFFER**

**Shallot Extract for Scar Treatment**

The infographic features a red background with white and pink text. On the left, there are three photographs of a finger: the top one is labeled 'Before' and shows a dark scar; the middle one is labeled 'After' and shows a significantly lighter and smoother skin surface. Below the 'After' photo is a clock icon and the text 'VISIBLE RESULTS IN 14 DAYS'. On the right side, there is a central illustration of a shallot bulb and a sliced shallot. Surrounding these are several circular callouts containing text: 'ALOE VERA', 'QUERCETIN 0.01%', 'ALLIUM ASCALONICUM 15%', 'VITAMIN C', and 'VITAMIN E'. The background is decorated with faint molecular structures and bokeh light effects.

**KEY INFORMATION**

TECHNOLOGY CATEGORY:

Personal Care - Cosmetics & Hair

Personal Care - Wellness & Spa

TECHNOLOGY READINESS LEVEL (TRL): **TRL6**

COUNTRY: **THAILAND**

ID NUMBER: **TO175023**

**OVERVIEW**

This technology offer features a natural remedy for scar reduction. The formulation integrates 15% shallot (*Allium ascalonicum*) extract and 0.01% quercetin, both well-known for their antioxidant potency and anti-wrinkle effects. These active ingredients are also known for their scar treatment properties. This formulation is positioned as an innovative alternative for individuals afflicted with elevated scars arising from surgical interventions, acne, or various traumatic injuries.

The shallot extract is obtained by employing environmentally conscious solvents alongside an ultrasonic extraction technique that is simpler and more efficient than conventional processes. Further elevating its efficacy, the encapsulation of pivotal quercetin within nanotechnology constructs facilitates heightened skin absorption.

**TECHNOLOGY FEATURES & SPECIFICATIONS**

The technology comprises a proprietary blend encompassing specific constituents and know-how, featuring:

- Shallot extracts that are gathered using environmentally friendly “green solvents” through the utilisation of a cold extraction method. The methodology yields amplified quantities of active constituents when juxtaposed with conventional water or alcohol-based methodologies, at an increase of 300% and 30% respectively.
- High concentration of quercetin originating from the shallot extract and pure quercetin are encapsulated within nanovesicles.
- Encapsulation technology which enhances quercetin release, skin permeation, and formulation stability.

The composition has been substantiated through clinical investigation over 14-28 days to yield non-irritating outcomes. A methodical safety appraisal involving a cohort of 22 healthy volunteers distinctly underscores the formulation's non-irritating attributes, substantiated by an appreciable score of 0.15.

## POTENTIAL APPLICATIONS

The shallot extract obtained through this extraction technology has a wide range of potential applications. This technology can be deployed to the cosmetic, cosmeceutical, and pharmaceutical industries, particularly:

- Skincare products e.g., anti-scar products
- Cosmeceuticals e.g., scar treatment products
- Herbal skincare / cosmeceutical products

## MARKET TRENDS & OPPORTUNITIES

The global scar treatment market was valued at USD 23.5 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 9.9% from 2023 to 2030. (Grand View Research, 2023)

## UNIQUE VALUE PROPOSITION

The unique value proposition of this scar treatment lies in the combination of extraction, formulation and encapsulation know-how, creating a versatile formulation that incorporates 15% shallot (*Allium ascalonicum*) extract and 0.01% quercetin encapsulated in nanovesicles for improved skin permeation and product stability. Moreover, comprehensive clinical trials have been undertaken to ascertain the product's safety.

The technology owner also possesses the capabilities to substantiate the efficiency of the solution across an extensive spectrum of scar types through empirical validation, offering partners seeking to embrace efficacious and dependable remedies a compelling advantage to address the burgeoning scar treatment domain.