

MICROBASE[®]
微邦科技

⊕ 喚醒肌膚新生

Awaken skin renewal

開啟逆齡之道

Unlock the path to ageless beauty



專利 3D 水涵晶

The Rumour Refreshing 3D Micro-Infusion





微邦科技股份有限公司成立於1997年，總部位於台灣，專注於「非矽基MEMS」深刻模造LIGA微機電的技術研發，擁有業界最紮實的研發團隊，已成為台灣非矽基微機電領域之領導公司，將微機電技術應用於不同領域於全球，包括噴孔片、醫療材料和美容產品等。

微邦利用黃光和非矽基深刻模建製程，經模具脫膜後形成微米級的微晶結構。微晶直徑小於3微米，長度介於1至100微米之間。其獨特的晶體結構，透過儀器的快速振動，提高了皮膚的穿透能力。每秒振動十次，形成微通道，有助於深入皮膚表層，使護膚品更深層、更有效滲透，有效提升肌膚的吸收能力。

MicroBase Technology Corporation was founded in 1997 in Taiwan. MicroBase is dedicated to developing non-silicon-based MEMS using LIGA technology, that enables the development of miniaturized devices and micron-scale parts. After a decade of development, we are the only company in Asia with integrated capabilities in laser material processing and mass production. MicroBase has applied its technology in many different fields, including electronic peripherals, medical materials, and beauty products worldwide.

Utilizing yellow light and a non-silicon-based electroplating molding process alongside microneedles, a cutting-edge cosmetic technology, the MicroBase features microneedles typically measuring under 3 microns in diameter and 1-100 microns in length. Its distinctive hypercube microcrystalline structure enhances skin penetration through rapid vibrations, oscillating ten times per second in both upward and downward directions, creating micro-channels in the skin. This facilitates the effective penetration of tough cuticles, enabling a deeper and more efficient delivery of skincare products, effectively doubling the skin's absorption capacity.



- 2016/03 通過
- Approval (Mar. 2016)



- 2016/07 通過清真認證
- Halal Approval (July 2016)



- 2017/05 通過 ISO22716 認證
- ISO22716 Approval (May 2017)

利用滲透儀上下震動的作動力，鬆動皮膚角質層後將保養品傳送到皮下組織，使保養品完全滲透提升吸收力的美容技術。

The vibration of the device penetrates the cuticle barrier and delivers skincare product deep into the skin. Its state-of-the-art technology allows ingredients to be absorbed by the skin completely.

1 micrometer = 0.001 millimeters

微晶的尺寸是以微米來衡量，一個微米是毫米的千分之一，我們的微晶直徑通常不超過3微米，在研發技術上我們的微晶可達到1微米的微晶直徑，我們可以精準的讓每個孔距間隔3微米大約1-100微米長，排列整齊、結構完整。我們的微晶片是由數百至千個微晶組成，使用時皮膚感覺就像被砂紙輕輕劃過，可達到去除老廢角質，幫助代謝的功能。

Our micro-needles are measured in micrometers, 1/1000 of a millimeter. The diameter of one of our micro-needles is usually less than 3 micrometers. With our technology, the diameter of our micro-needle could be 1 micrometer. The needles we produce have the precision of 3 micrometers between holes and a length of 1-100 micrometers, are arranged in order, and have structural integrity. Our microcrystalline film is composed of hundreds to thousands of micro needles. When used on the skin, it feels like being caressed lightly by sand paper, exfoliating the skin while increasing skin metabolism.



微晶頭
Micro-crystalline



- 1.98%玻尿酸
HA 98%
- 2.97%玻尿酸+維生素(醣甘)
HA97%+AA2G
- 3.PLA生物可降解生醫材料
PLA Biodegradable



鬆動角質層、創造微孔通道
Unique hypercube microcrystalline
structure doubles up skin absorption.



吸收率提升50%
Increasing absorption by 50%

微邦的「3D立體水涵晶」技術將有效成份鎖在微晶結構裡，利用微導儀滲透儀上下震動的作動力鬆動皮膚角質層，創造微孔道，讓有效成份徹底滲透至皮膚底層。

The "3D Micro Infusion" technology by MicroBase locks the effective ingredients into the microcrystalline structure.



革命性獨創技術

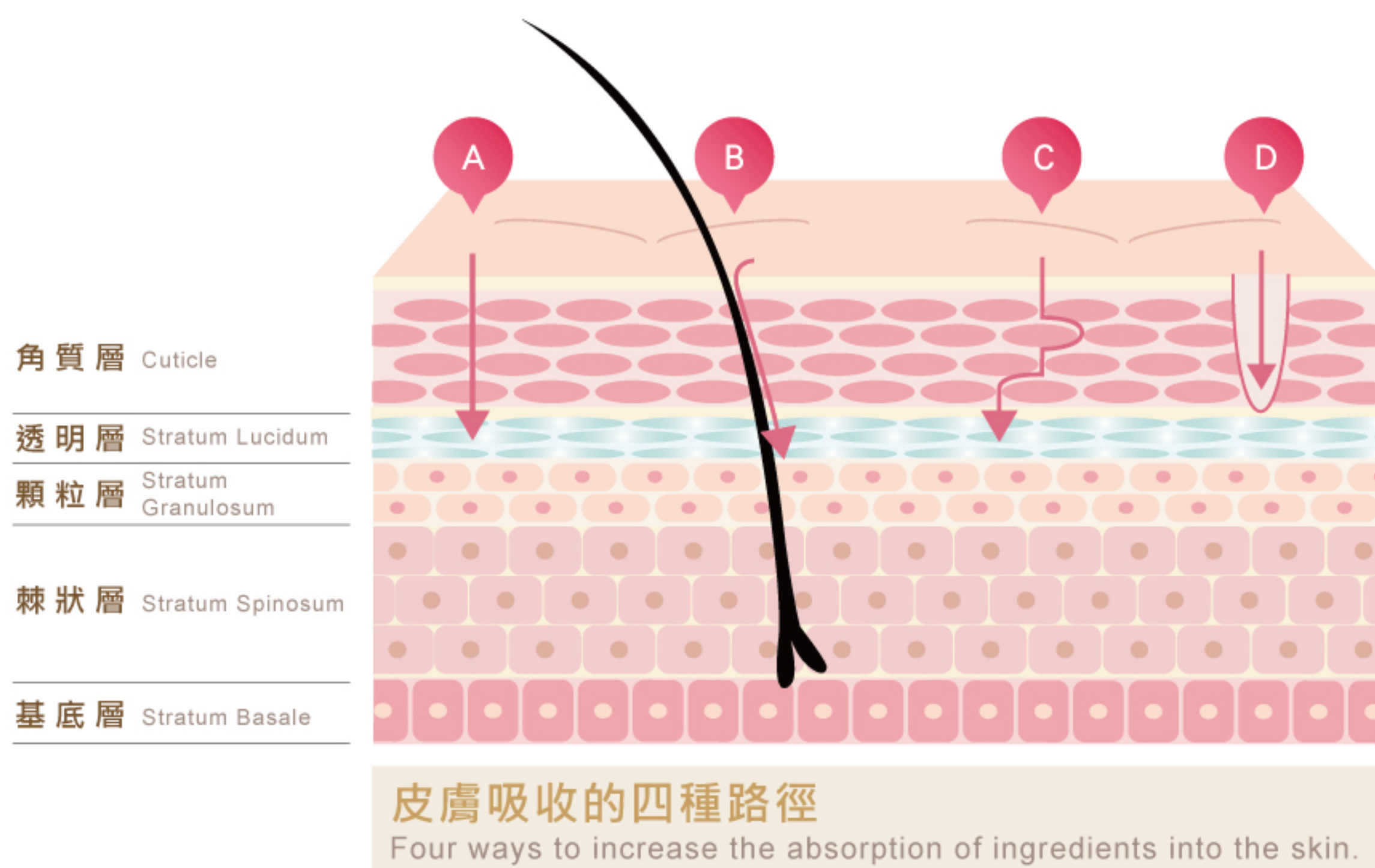
Revolutionized Technology by MicroBase

一般人的皮膚角質層厚度為10~40微米，利用滲透儀上下震動的作動力鬆動皮膚角質層後將保養品傳送到皮下組織，使受損的皮下組織啟動自體修復機制，達自我修復效果，促進表皮細胞與真皮細胞增殖，使真皮細胞新生與活化，搭配不同功效的微晶可以幫助皮膚緊實，改善臉部細紋，魚尾紋、斑點、黑眼圈、缺陷等等，吸收力有效提升50%。

The cuticle is generally 10-40 microns thick, The vibration of the device penetrates the cuticle barrier and delivers serum to the hypodermis.

This allows damaged subcutaneous tissue to start its self-repair and self-healing process, promoting the proliferation of skin and dermal cells. Micro-needle treatment can tighten up the skin and remove facial fine lines, crow's feet, spots, dark circles, blemishes, etc.

The absorption of product is effectively increased 50% after usage.



A：需要特殊的藥物設計引導才可滲透。

Special medicine combinations are required to penetrate the skin.

B：毛囊只占皮膚總面積的0.1%，而且因皮脂分泌的阻塞，功效成份通透效率不佳。

Hair follicles only make up 0.1% of our skin; due to the blockage of sebum secretion, skin product ingredients can't penetrate the skin effectively.

C：一般面膜滲透率慢。

Ingredients of normal facial masks penetrate the skin slowly.



D：3D水涵晶導入，能有效滲透。

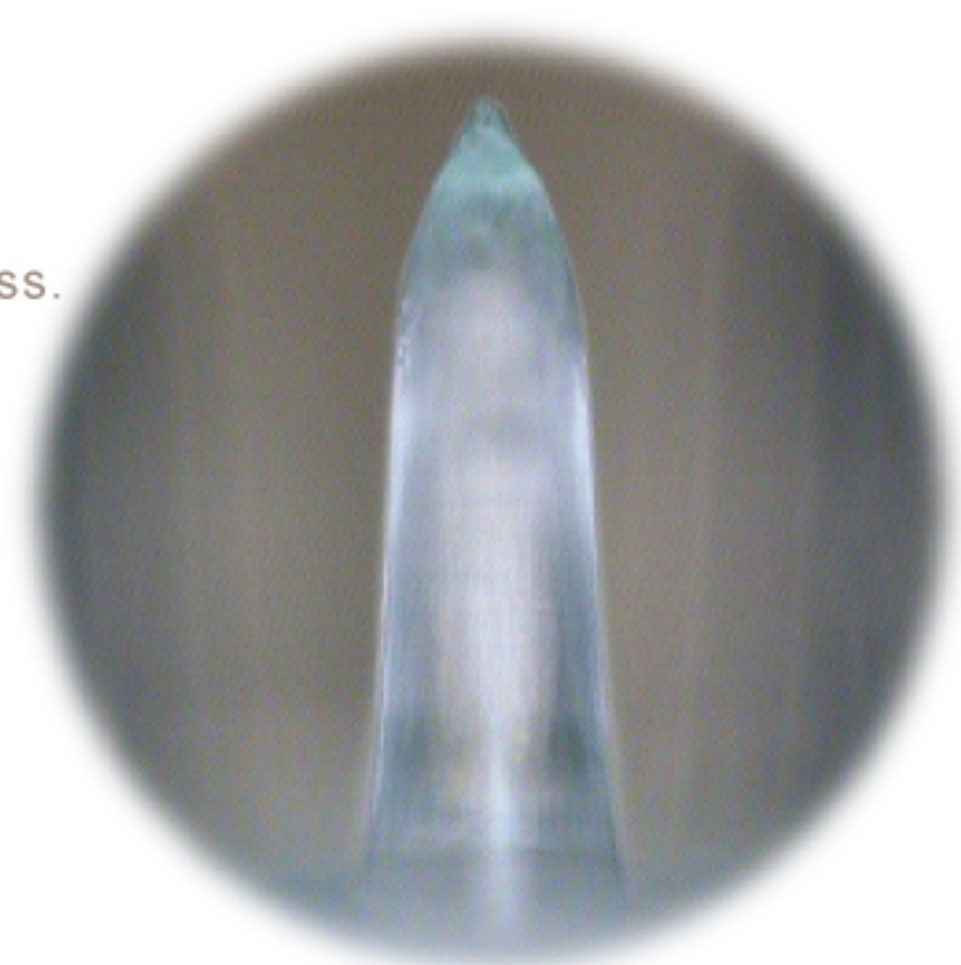
The 3D Micro-Infusion penetrates the skin effectively.



微邦PDMS翻模技術

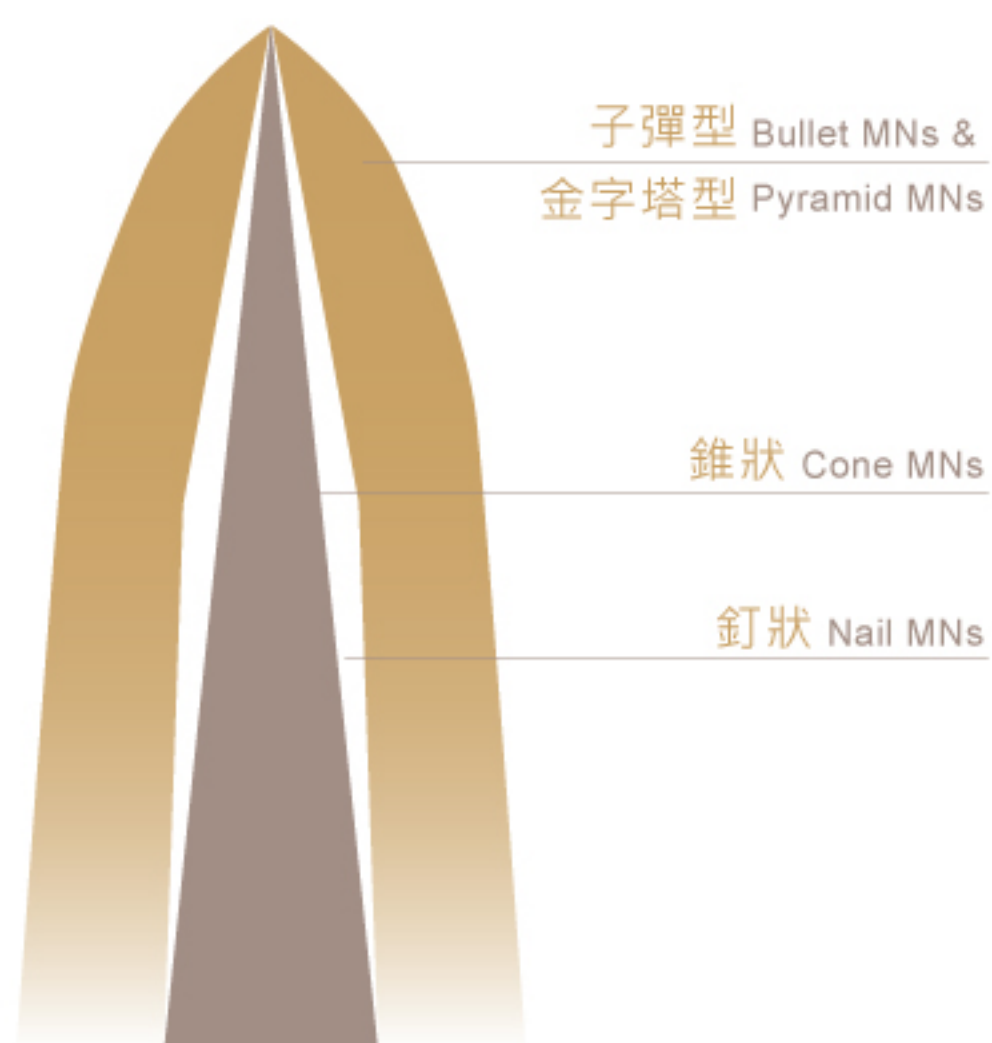
PDMS Rollover Technology by MicroBase

- 黃光與非矽基深刻模造製程
Yellow light and non-Si-based electroplating molding process.
- LIGA微機電技術
LIGA microelectromechanical technology.
- 翻模脫膜後製成的微米大小的微晶結構
After roll over and mold release, needles are micrometer-size.
- 有效鬆動角質層，創造微孔道
Effectively puncture the cuticle barrier, opening up countless micro-paths.



研發製程能力

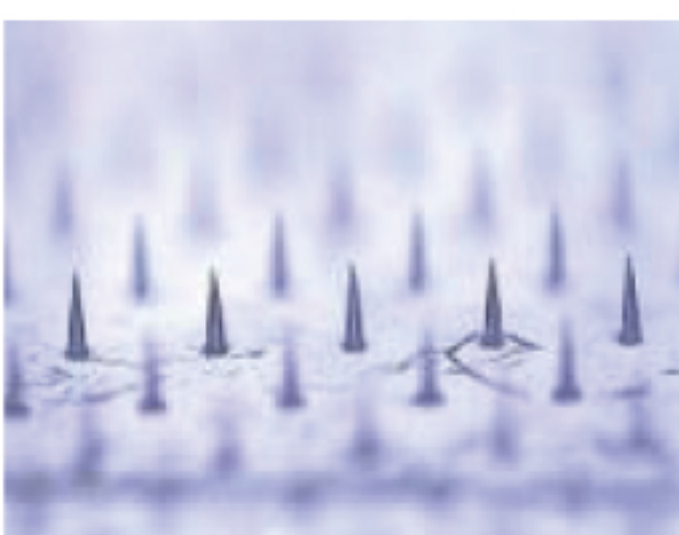
Process Capability



金字塔型 Pyramid



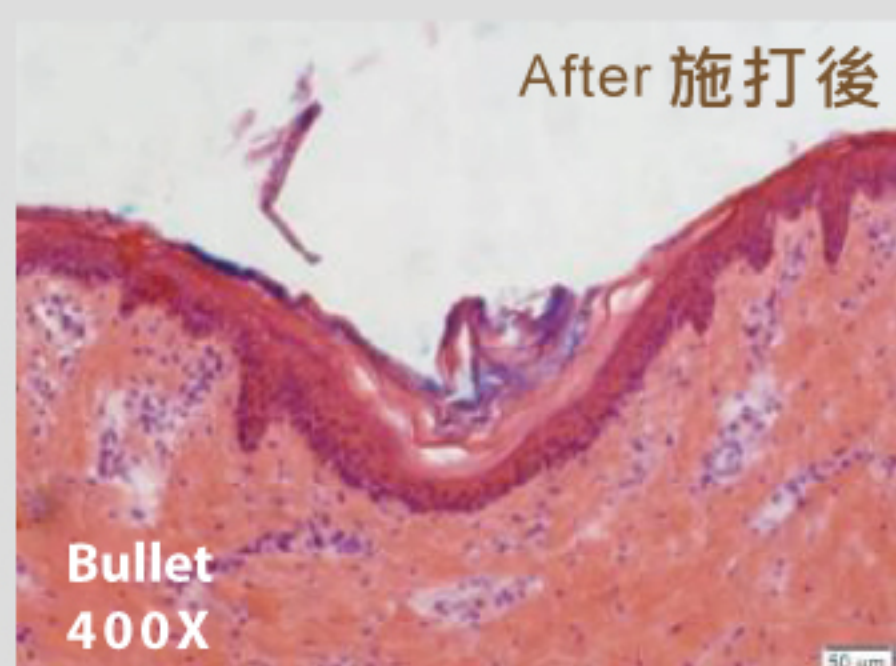
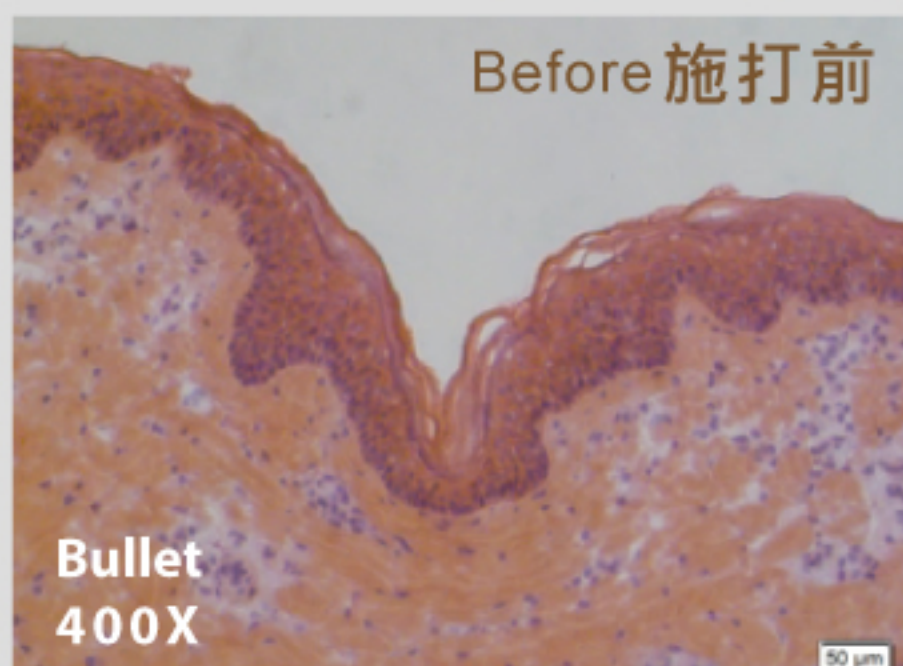
釘狀 Nail-liked



錐狀 Cone



子彈型 Bullet

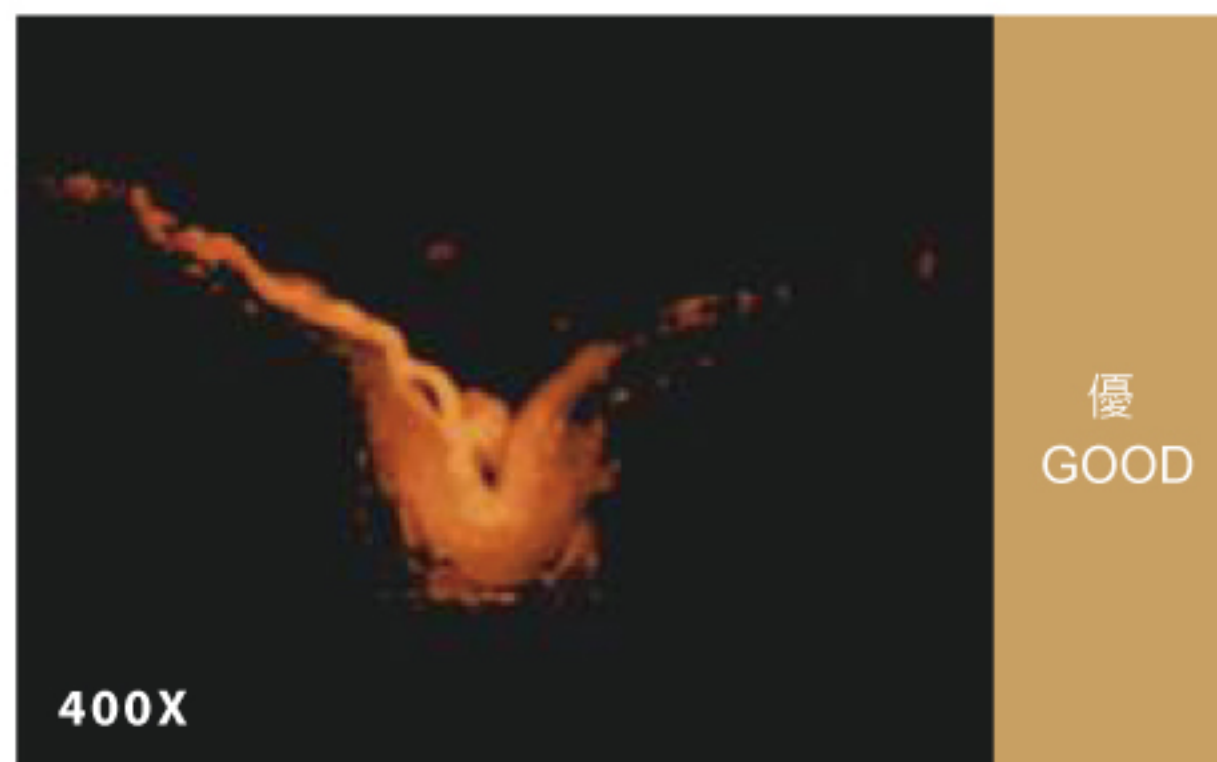


滲透實驗 Penetration Test



一般塗抹精華液的方式無法有效滲透表皮層。

Serum can't effectively penetrate epidermis if applied by hand.



優
GOOD

經微晶作動按摩後，精華液的滲透深度達到角質層下93 μm ，有效物質能滋潤有棘層。

However, if massaged in with a 3D Micro-Infusion professional, serum will penetrate 93 μm under the cuticle barrier; its effective ingredients will moisten the stratum spinosum.

表皮層組成及功能 Epidermis Composition and Function

表皮層 Epidermis	敘述 Description	備註 Remarks
角質層 Cuticle	對抗光線，乾燥無菌，由角蛋白組成。新陳代謝週期：28天。 It protects against light; it's dry, sterile, and is composed of keratin. Metabolism cycle: 28 days.	由5~20層細胞堆疊，厚度約15 μm 。 It is composed of 5-20 layers of cells with a thickness of 15 μm .
透明層 Stratum Lucidum	外界的純水無法透過此層，因而阻擋水份被皮膚吸收。 Purified water can't penetrate this layer. Therefore, it blocks the skin from absorbing moisture.	由2~3層細胞堆疊。 It is composed of 2-3 layers of cells.
顆粒層 Stratum Granulosum	形成蛋白質。 It forms protein.	由2~4層細胞堆疊。 It is composed of 2-4 layers of cells.
有棘層 Stratum Spinosum	外界的純水無法透過此層，因而阻擋水份被皮膚吸收。 It is the largest layer of the skin and is capable of cell regeneration. It and the stratum basale combined are called stratum germinativum.	由2~4層細胞堆疊。 It is composed of 2-4 layers of cells.
基底層 Stratum Basale	是表皮層最深的一層，含黑色素細胞，細胞會再生。 It is located at the bottom of the epidermis. It contains melanocytes, and cells in this layer regenerate.	圓柱型角質細胞，與真皮相連。 It contains cylindrical cells and is connected to the dermis.

 無塵環境設備 無塵室等級：10,000
Clean Room Manufacturing Facility Class:10,000





儀器系列

Device Series

特點

Features :

1. 獨創的3D立體水涵晶專利技術，能精準控制能量傳導，使能量不被表皮分散，以更有效且安全的方式刺激並按摩肌膚，打開細胞間隙，促進循環提升肌膚的吸收力。
 2. 抗衰老美容技術，重組肌膚構造改善膚質紋理，使用後保水感明顯改善。
 3. 非侵入式、無刺激性、安全性高，使用時同時進行眼部按摩改善黑眼圈、色素沉澱及細紋產生等。
1. Unique Micro-Crystalline. It's a proprietary technology that can powerfully deliver product elements deep into the epidermis of the skin and cellular structure, to be absorbed by the skin completely.
 2. Medical grade Anti-Aging Technology. Improves skin conditions by reforming the basic cell matrix, showing remarkably improved skin hydration after usage.
 3. Anti-aging, non-invasive, and non-irritating. Benefit from acupuncture treatment around your eyes, which can improve dark circles, pigmentation, fine lines, and so on.

商品說明

Product Description :

利用滲透儀上下震動的作動力鬆動皮膚角質層後，將保養品傳送到皮下組織，使保養品完全滲透提升吸收力的美容技術。

The vibration of the device penetrates the cuticle barrier and delivers the skincare product ingredients to the hypodermis. It's state-of-the-art technology allows ingredients to be absorbed by the skin completely.

微邦的「3D立體水涵晶」專利技術將有效成份鎖在微晶結構裡，利用滲透儀上下震動的作動力鬆動皮膚角質層，創造微孔道，讓有效成份徹底滲透至皮膚底層，所以使用後可讓皮膚吸收力提升**50%**。

The "3D Micro Infusion Micro-Crystalline" proprietary technology by MicroBase locks the effective ingredients into the microcrystalline structure. The vibration of the device penetrates the cuticle barrier, opening up countless micro-paths to deliver effective ingredients to the lowest layer of the skin, increasing absorption by 50%.





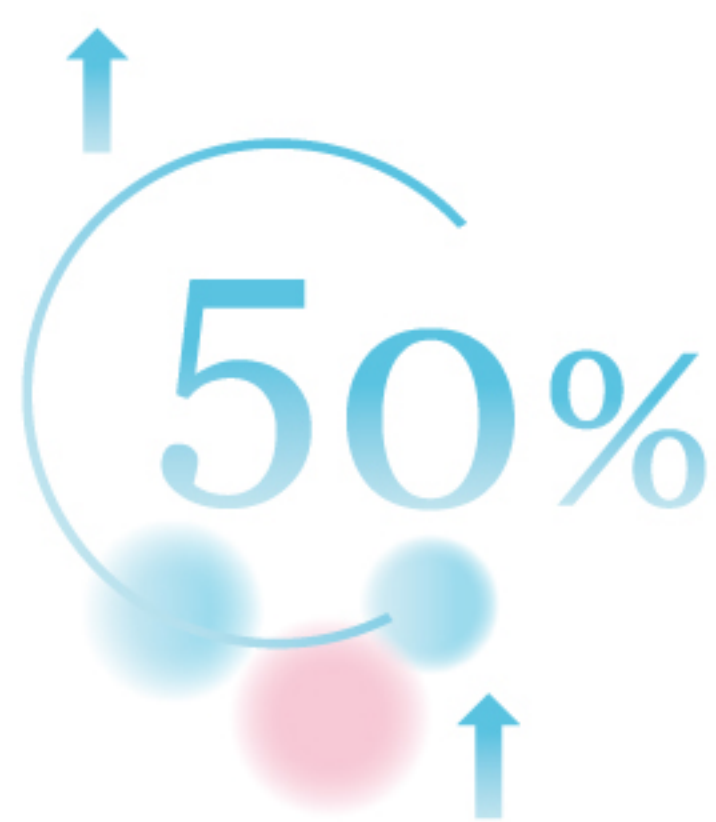
儀器系列
Device Series

The Rumour 3D 水涵晶滲透專業機 The Rumour 3D Micro-infusion Professional

- 5段速 / 使用Φ20mm微晶頭 / 適用於醫美、沙龍、SPA館
5-speed / Φ20mm Microcrystalline Heads /
For medical cosmetic centers, salons, and spas

The Rumour 3D 水涵晶滲透儀 Refreshing 3D Micro-Infusion Tapping Device

- 1段速 / 使用Φ10mm微晶頭 / 適用於個人居家保養
1-speed / Φ10mm Microcrystalline Heads / For personal home use



皮膚吸收力提升50%





The Rumour 3D水涵晶

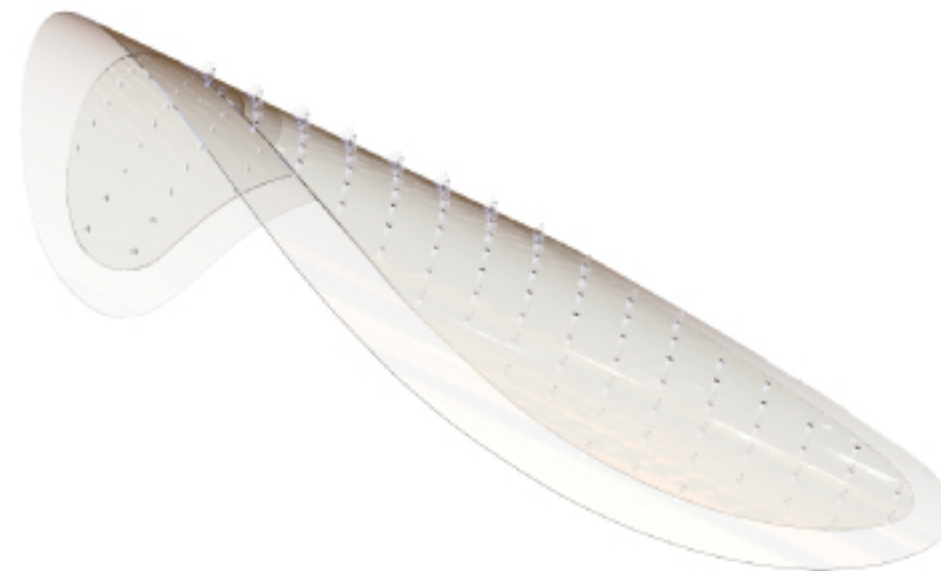
The Rumour Refreshing 3D Micro-Infusion

鬆

動角質層、創造微孔通道

微晶玻尿酸滲透，填補細紋好幫手

We use advanced technology to enhance penetration by activating the micro-channels of the skin.

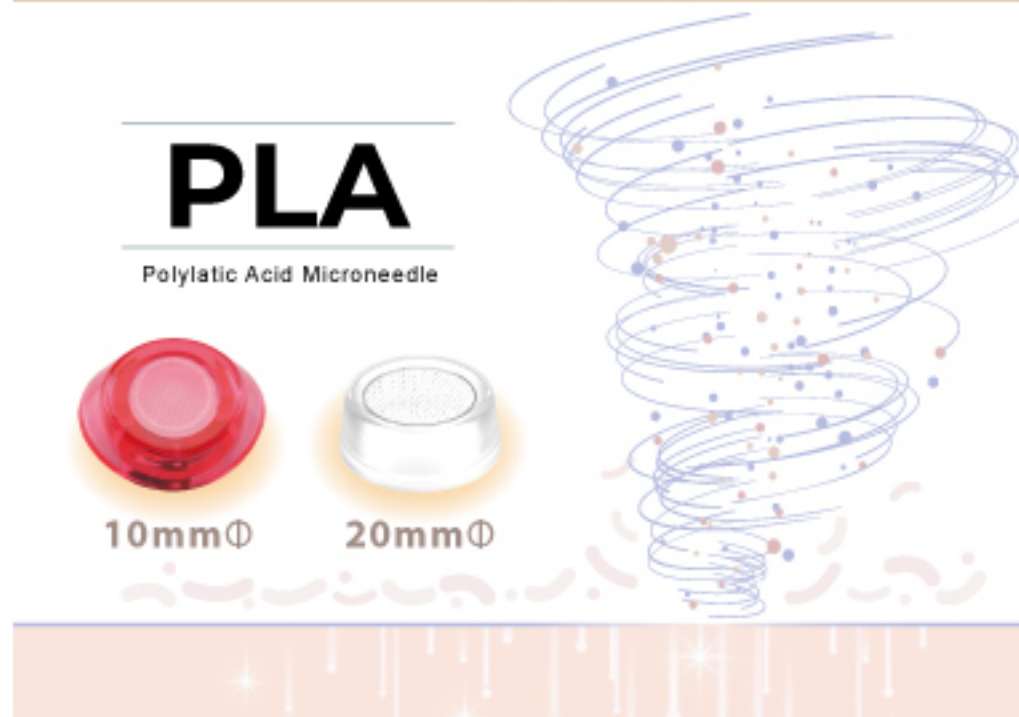


不可溶性微晶探頭

Insoluble Microneedles

聚乳酸微晶

PLA Microneedles



3D水涵晶鬆動角質層

3D Mirco-crystalline punctures the cuticle barrier.



提高保養品滲透力

Efficiently delivers skin care products.



提升肌膚吸收力50%

Doubling the amount of absorption into the skin.

可溶性微晶探頭

Soluble Microneedles

透明質酸玻尿酸

Hylauronic Acid Microneedles



- 98%高濃度玻尿酸
HA 98%
- 保濕+抗皺
Moisturize + Reduce fine lines
- 對抗細紋
Reduce crow's feet

維他命C亮采微晶

Vitamin C Microneedles



- 維他命C醣苷+97%玻尿酸
AA2G + HA 97%
- 美白+保濕
Whiten + Moisturize
- 淡化臉部斑點
Reduce facial blemishes

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