

原生之美，自然甦醒
Beauty isn't created.
It's revealed.

聚左乳酸在再生美容領域
的科學研究實證
Science about Poly-L-Lactic Acid
(PLLA) in regenerative aesthetics

聚左乳酸的特性
PROVEN PROPERTIES OF PLLA

- 良好生物相容性 Biocompatibility⁶
- 良好生物降解性 Biodegradability⁶
- 組織再生能力 Recognized in tissue regeneration⁷
- 全球醫美領域應用超過25年
Used globally in aesthetics for over 25 years

科學實證
NEW SCIENTIFIC INSIGHTS

- 乳酸被認為是一種多功能訊號分子 Lactic acid is recognized as a multifunctional signalling molecule^{8,9}
- 已被證實可透過纖維母細胞活化建構細胞外基質（ECM），透過低炎症途徑 Proven to build ECM by fibroblast activation through a low-inflammatory pathway¹⁰
- 能促進低炎症膠原蛋白的合成，透過M2巨噬細胞化途徑 Capable to promote low-inflammatory collagen synthesis through M2 macrophage polarization¹¹

聚左乳酸在醫學美容中的作用機制
Mode of action of Poly-L-Lactic Acid
in medical aesthetics¹²



JULÄINE™, a unique PLLA-based
skin bio-activator

DESIGNED TO REGENERATE

- Biocompatible and biodegradable⁶, strong safety profile
- Stimulates the body's natural collagen in a low-inflammatory way¹⁴
- Is proven to smoothen wrinkles and tighten the skin¹³
- Delivers progressive and long-lasting facial rejuvenation⁶
- Ensures smooth tissue integration

再生設計特點

- 良好生物相容性、生物降解性⁶、高安全性
- 以低炎症方式激活身體生成自體膠原蛋白¹⁴
- 有效撫平皺紋、緊緻肌膚及改善膚質¹³
- 自然、長效、漸進地讓肌膚回復年輕緊緻⁶
- 確保均勻融合皮層組織

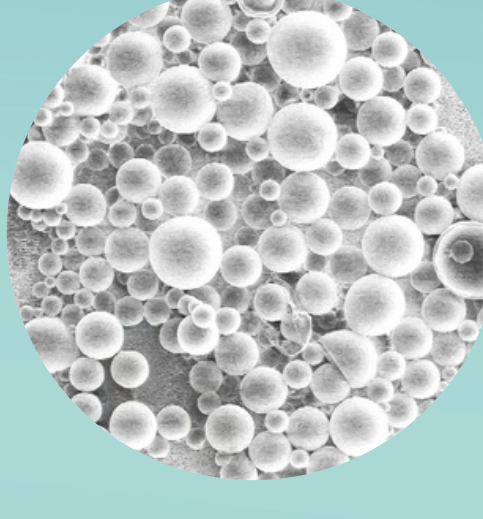
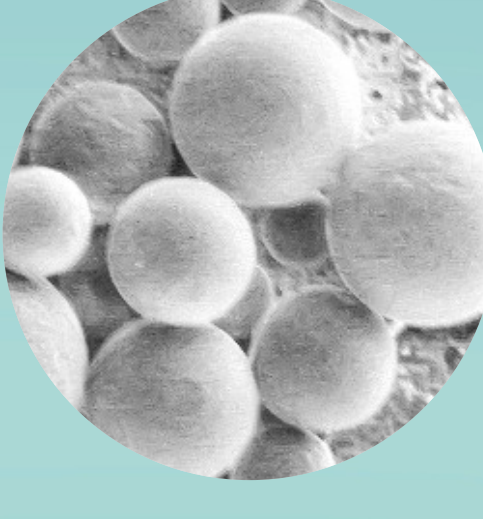


聚左乳酸
肌膚活化劑

- 150 mg of Poly-L-Lactic Acid microspheres 聚左乳酸微球
- 45 mg of sodium carboxymethylcellulose 凝膠載體
- 145 mg of non-pyrogenic mannitol 甘露醇

獨特微球技術設計
Designed with the unique
LASYNPRO™ microsphere
technology

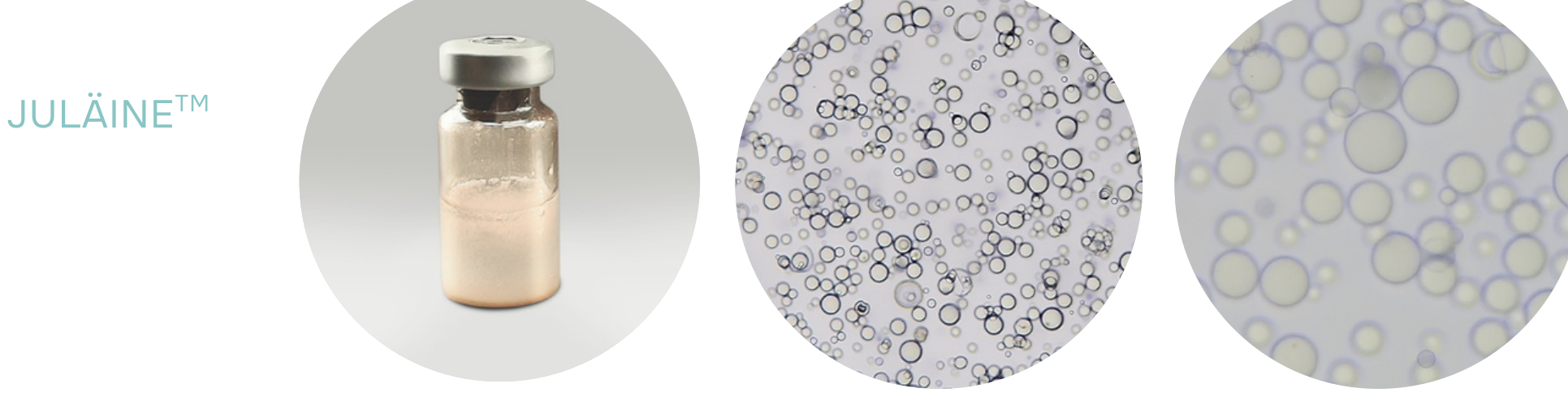
LASYNPRO™ technology with spherical shape and homogeneous structure
平滑球體和均質結構



- 超輕注射流 Ultra-light injection flow¹⁵
- 微球分散均勻，注射後不易聚集特性¹⁶
Microspheres show limited aggregation and a smooth dispersion¹⁶
- 確保微球能均勻融合皮層組織，讓膠原於肌膚內平均生長¹⁴ Ensures smooth tissue integration for even collagen distribution¹⁴

研究實證 JULÄINE™ 的表現更佳
經複溶後分散均勻且不易聚集¹⁶

Reconstituted JULÄINE™ is homogeneous and shows low aggregation¹⁶

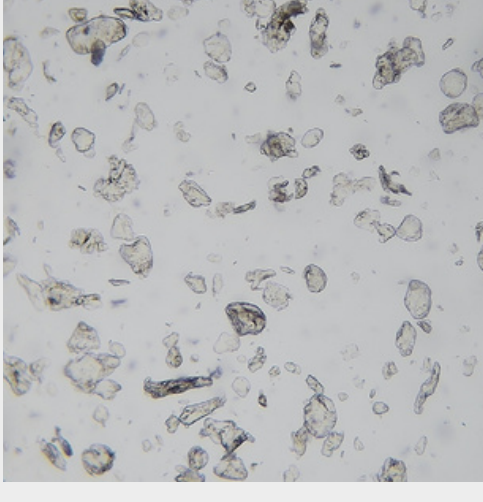


- 完全複溶均勻 Full restoration
- 無任何泡沫或結塊殘留於瓶身
A reconstituted solution without foam or debris
- 在所有時間點上都保持穩定
A stable solution at all timepoints

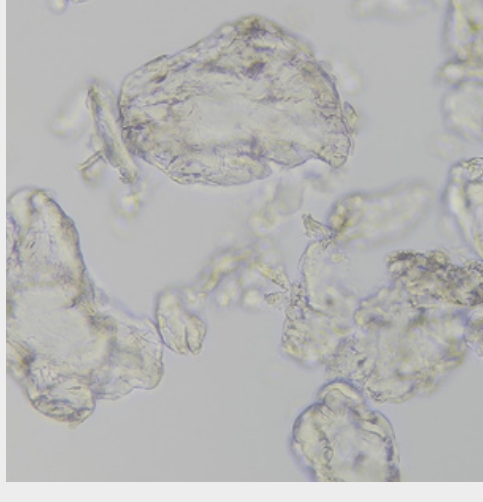
其他聚左乳酸產品
Other PLLA
Product



Images taken immediately after reconstitution (5 ml)



Microscope droplet-smear observations: magnification of reconstituted solution at 100X after 5 minutes and at 400X after 40 minutes respectively.



- 複溶後瓶壁內殘留結塊
PLLA left on the inside of the vial after reconstitution
- 溶液表面有泡沫層，無法用作注射
A solution with a foam layer that cannot be injected
- 顆粒呈不規則形狀，聚集成結塊
Particles aggregate

Microsphere design for smooth
tissue integration and controlled
degradation¹³

微球型態¹⁷

- 圓球形狀
- 平滑表面
- 符合理想大小：平均粒徑為32.6µm

MICROSPHERE FORMAT¹⁷

- Uniform, spherical shape
- Smooth surface
- Mean size 32.6 µm within the optimal size range

JULÄINE™
Of Sweden
microsphere,
designed with

LASYNPRO™
TECHNOLOGY

設計特點

微球結構

- 高密度、低孔性結構¹⁷
- 可控且均勻降解¹³
- 保持圓球形狀¹³

DENSE COMPOSITION

- High density, low porosity¹⁷
- Controlled and smooth degradation¹³
- Spherical shape maintained¹³

均勻分散¹⁶
融合組織¹³

Smooth dispersion¹⁶
and
tissue integration¹³

漸進持續釋放
聚左乳酸
膠原再生過程
自然持久

Gradual release
of Lactic Acid

真實用家效果
JULÄINE™ offers
natural results*



● before

● after



● before

● after

*效果因人而異 Individual results may vary

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