

## DermaLab Elasticity Probe



### Elasticity Probe

The Elasticity Probe delivers objective measurements of skin elasticity by measuring skin elevation and retraction time. Measurements can be performed independently or before and after a skin intervention or the onset of skin conditions.

#### Technology

The probe features a measurement chamber connected to a main unit with an integrated negative pressure cylinder. This cylinder holds a preset negative pressure of 150/400/650 mbar, which instantly is applied to the skin surface when inducing measurement.

Within the measurement chamber, an infrared sensor is centrally positioned above the skin surface to record skin elevation and retraction. With the probe in place, negative pressure lifts the skin, and retraction time (R) is measured during skin release.

#### Benefits

- The probe is ultra lightweight (approx. 7 grams) for minimum skin bias
- Measurements can be performed on both soft, normal, and firm skin
- The probe uses adhesive tape to minimize human impact
- The software provides adjustable parameters of skin thickness and number of cycles to accommodate user needs
- U-values provide detailed data on each part of the elasticity curve
- F-values (coming soon) describe specific patterns of skin deformation and recovery

#### Specifications

- Principle: Suction method featuring an elevation phase and a retraction phase
- Settings: Adjustable pressure (150, 400, and 650 mbar) and skin thickness (in mm)
- Measurement parameters: Retraction Time, viscoelasticity, U-values and F-values (coming soon)
- Diameter: 1 cm
- Measuring area: 0.785 cm<sup>2</sup>

### APPLICATION

Skin elasticity is the property that allows the skin to change and recover shape when stretched or deformed. It is highly dependent of collagen, elastin, and ground substance components in the skin. Skin elasticity can be affected by factors such as age, sun damage, or certain skin conditions such as psoriasis and scleroderma.

#### Examples of fields of application with the Elasticity probe:

- Research on wound healing and scarring
- To gain insight into skin conditions
- Product testing and development, e. g.:
  - Moisturizers and anti-aging creams
  - Fillers and collagen booster injections
  - Ingestible skin supplements

**Note:** The probe is not a medical device and is not intended for medical purposes such as diagnosis or monitoring of skin disease.

### The Elasticity Probe

Is one of many parameters available for the customizable skin analysis tools: The DermaLab Combo, the DermaLab Mini, and DermaLab Aesthetic. This probe is also available as a single parameter.

To learn more about our solutions, visit [cortex.dk](http://cortex.dk)



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## Selected published studies utilizing the DermaLab Elasticity Probe

1. *Epidermal Barrier Parameters in Psoriasis: Implications in Assessing Disease Severity.* **Morariu, Silviu-Horia, et al.** 14, s.l. : Journal of Personalized Medicine, 2024, Vol. 5.
2. *Superficial Intradermal Injections of Cohesive Polydensified Matrix Hyaluronic Acid Fillers for the Improvement of Facial Pores and Skin Quality: A Split-Face Randomized Study.* **Rutnumnoi, Thanachat, et al.** 5, s.l. : Journal of Cosmetic Dermatology, 2025, Vol. 24.
3. *Fat Grafting Subjectively Improves Facial Skin Elasticity and Hand Function of Scleroderma Patients.* **Strong, Amy L., et al.** 2021, Plastic and Reconstructive Surgery - Global Open.
4. *Clinical Relevance of Elastin in the Structure and Function of Skin.* **Baumann, Leslie, et al.** 2021, Aesthetic Surgery Journal Open Forum.
5. *Effectiveness of Topical Hemocoagulase on the Healing of Surgical Wounds in the Neck: A Randomized Clinical Trial.* **Albert, Dyna and Muthusekhar, M. R.** s.l. : Journal of Maxillofacial and Oral Surgery, 2025.
6. *The Use of Fish Skin Grafts in Children as a New Treatment of Deep Dermal Burns—Case Series with Follow-Up after 2 Years and Measurement of Elasticity as an Objective Scar Evaluation.* **Staubach, Raphael, Glosse, Helen and Loff, Steffan.** 8, s.l. : Journal of Clinical Medicine, 2024, Vol. 13.
7. *Effects of Retinol, Natural Pea Peptide and Antioxidant Blend in a Topical Formulation: In Vitro and Clinical Evidence.* **Cook, Brian, et al.** 1, s.l. : Dermatologic Therapy, 2024, Vol. 15.
8. *Phyllanthus emblica L. (amla) branch: A safe and effective ingredient against skin aging.* **Chaikul, Puxvadee, et al.** 5, s.l. : Journal of Traditional and Complementary Medicine, 2021, Vol. 11.
9. *Evaluation of the Performance and Safety of a New Micro-Needle Technology in Comparison With the Classic Needle on the Antiaging Effects of a Biorevitalizing Solution: A Randomized Split Face/Neck Study.* **Boca, Andreea, et al.** 12, s.l. : Journal of Cosmetic Dermatology, 2024, Vol. 23.
10. *Quantitative Assessment of New Frontiers in Dermatochalasis and Periorbital Hyperpigmentation Treatment: The Role of Cross-Linked Porcine Collagen.* **Chuang, Andy D. C., et al.** s.l. : Facial Surgery, 2025, Vol. 49.
11. *Revitalizing skin, hair, nails, and muscles: Unlocking beauty and wellness with vegan collagen.* **Warma, Samrat, et al.** 11, s.l. : Journal of Cosmetic Dermatology, 2024, Vol. 23.
12. *The evidence from in vitro primary fibroblasts and a randomized, double-blind, placebo-controlled clinical trial of tuna collagen peptides intake on skin health.* **Morakul, Boontida, et al.** 12, s.l. : Journal of Cosmetic Dermatology, 2024, Vol. 23.

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