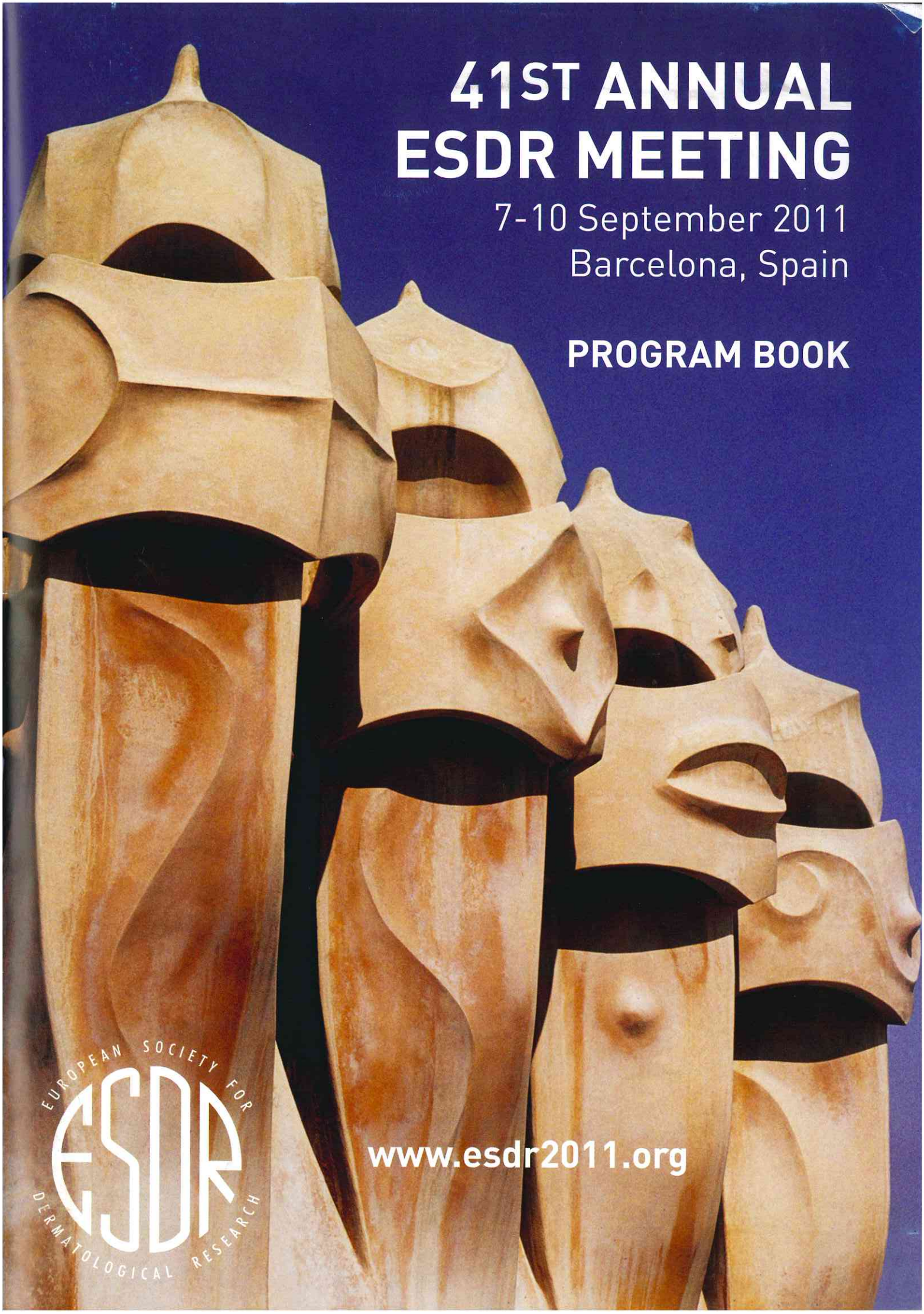
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ABSTRACT SUBMISSION

Title: Acute instrumental study for the evaluation of the elasticizing activity of a new composition

Abstract No. 0586

Title Acute instrumental study for the evaluation of the elasticizing activity of a new composition

Abstract

A clinical study on healthy volunteers was performed with the aim to investigate the skin elasticizing activity of a formulation containing a thiolated compound and a mixture of esters of fatty acids and glycerol, with that of white soft paraffin as a reference standard.

The volunteers were 21 women, aged between 24 and 55 years (mean 45 yrs), informed consent signed. The test and reference product were randomly applied once, by a mild massage, on the volar surface of forearm. Plastoelasticity measurement were performed at baseline and 30 minutes after the application of each product by means of torsiometry measured by the Dermal Torque Meter (Dia-Stron LTD).

The parameters measured by the a.m. technique were the elastic recovery measured as a ratio between immediate elastic recovery and immediate extensibility (Ur/Ue), and the skin elasticity measured as the ratio between immediate elastic recovery and maximum extensibility ((Ur/Uf).

The percent changes vs. baseline of torsiometric parameters 30 min after application on the forearm skin resulted in + 24% for Ur/Uf ($p<0.01$) and + 23% for Ur/Ue ($p<0.001$) for the test product (Student's t test). Conversely, the changes vs. baseline for reference were +13% for both parameters ($p<0.05$).

Fats are known to increase elasticity in terms of extensibility and elastic recovery. Our data show that a mixture of glycerides and a thiolated compound is capable to further increase skin extensibility and elastic recovery.

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ACUTE INSTRUMENTAL STUDY FOR THE EVALUATION OF THE ELASTICIZING ACTIVITY OF A NEW COMPOSITION

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AIM

To investigate the skin elasticizing activity of a new formulation containing a thiolated compound and a mixture of esters of fatty acids and glycerol (test product) with that of white soft paraffine (reference standard).

METHODS

Study design

In the frame of a screening program, a controlled clinical study was performed on 21 healthy volunteers, aged between 24 and 55 years (mean age 45 years), who signed the informed consent.

Each woman applied once (acute), by mild massage, on the volar surface of the forearm, both the test product and the reference standard.

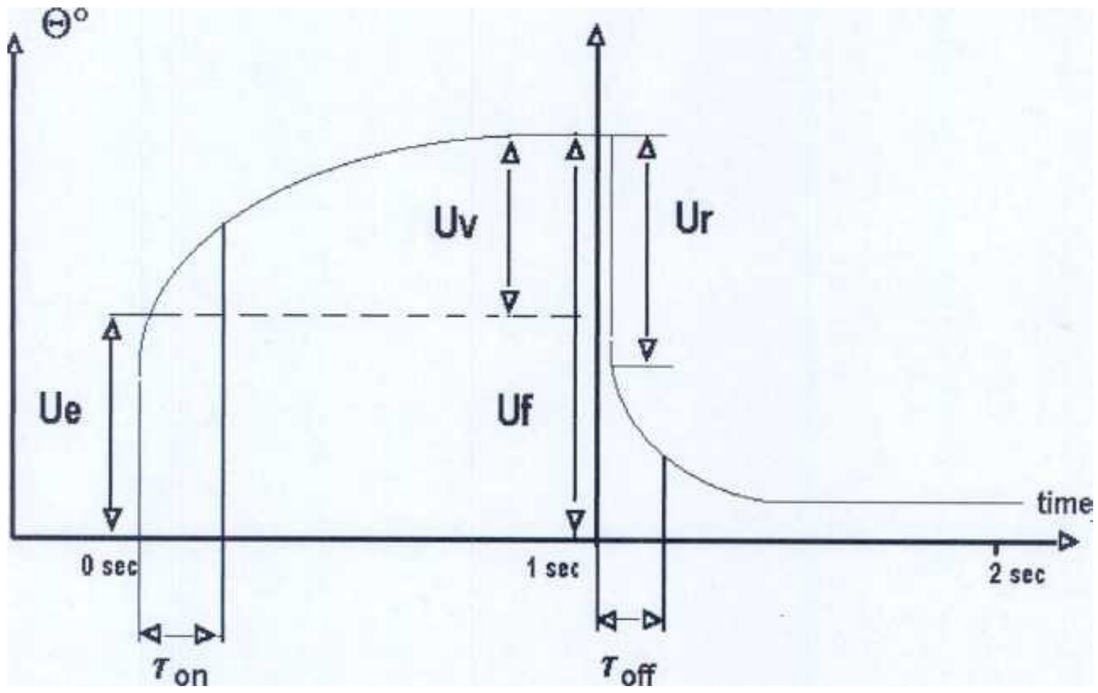
Dermal Torque Meter (Dia-Stron LTD)

This skin instrument consists of a mechanical probe, a control unit that connects to a PC and a Windows application package.

The torsional measurement of skin requires a central disk to be attached to the skin with adhesive tape. A concentric outer stationary ring is also attached with adhesive, so defining an annulus of skin under measurement. In order to study the upper layer of skin, a 1mm gap between the central disk and the concentric stationary ring was kept.

The mechanical properties of the skin were determined by application of torque to the central disk for 1 second and by accurately measuring the degree of rotation during torsion (torque on) and the degree of rotation at torsion suspension (torque off).

Torque on and Torque off curves and related parameters



Where:

Ue = immediate extensibility (torque on at 0.02 seconds)
Uf = maximum extensibility (torque on at 0.9 seconds)
Ur = immediate elastic recovery (torque off at 0.2 seconds)

SKIN PLASTOELASTICITY WAS CALCULATED AS FOLLOWS:

ELASTIC RECOVERY (Ur/Ue) — expressed as the ratio between immediate recovery and immediate extensibility.

SKIN ELASTICITY (Ur/Uf) - expressed as the ratio between immediate elastic recovery and maximum extensibility.

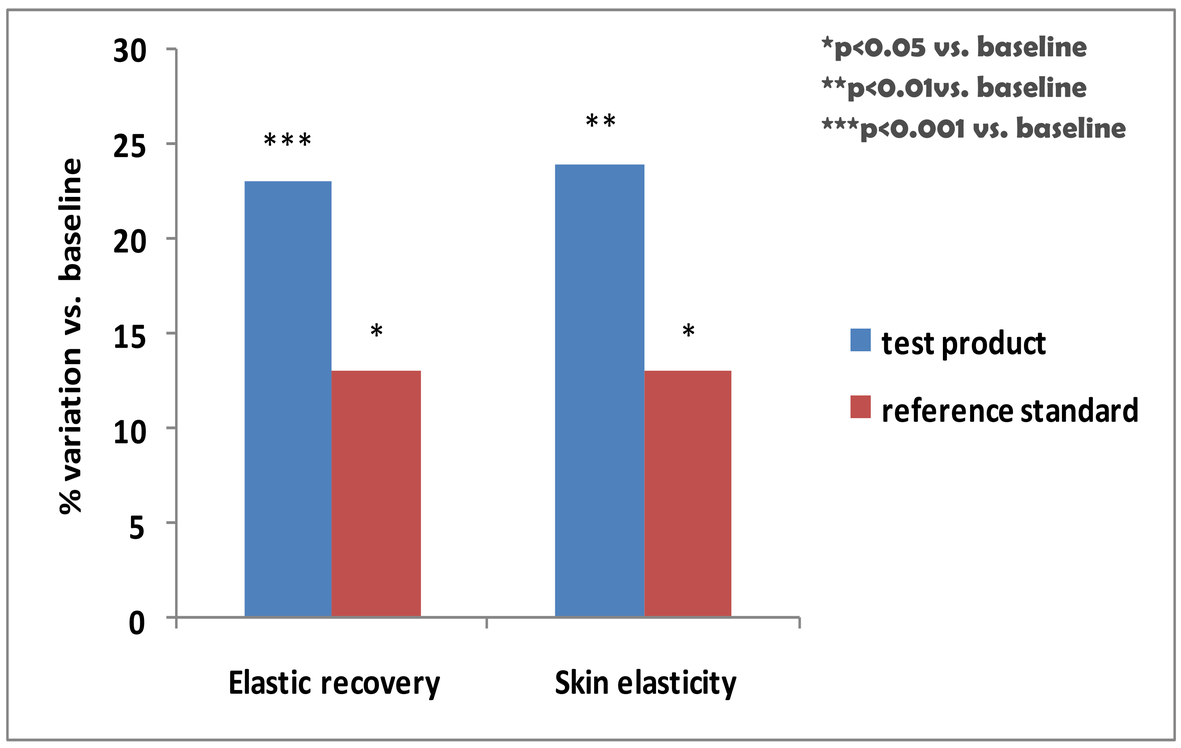
RESULTS

The percent variations versus baseline of torsiometric parameters 30 minutes after the application of the test product on the volar surface of the forearm resulted in:

- **Elastic recovery —A significant increase by 23% was observed with Ur/Ue corresponding to 0.596 ± 0.097 and 0.735 ± 0.147 at baseline and 30 minutes after application, respectively (p<0.001 Student t test).**
- **Skin elasticity—A significant increase by 24% was observed with Ur/Uf corresponding to 0.319 ± 0.060 and 0.396 ± 0.124 at baseline and 30 minutes after application, respectively (p<0.001, Student t test).**

The percent variations versus baseline of torsiometric parameters 30 minutes after the application of the reference standard on the volar surface of the forearm resulted in:

- **Elastic recovery—A significant increase by 13% was observed with Ur/Ue corresponding to 0.664 ± 0.095 and 0.752 ± 0.102 at baseline and 30 minutes after application, respectively (p<0.05, Student t test).**
- **Skin elasticity—A significant increase by 13% was observed with Ur/Uf corresponding to 0.366 ± 0.075 and 0.414 ± 0.089 at baseline and 30 minutes after application, respectively (p<0.05, Student t test).**



CONCLUSIONS

Fats are known to increase elasticity in terms of extensibility and elastic recovery.

Our data objectively demonstrated that the new formulation containing a thiolated compound and a mixture of esters of fatty acids and glycerol is capable to further increase skin extensibility and elastic recovery.