

# EFFECT OF WARMING BASIS CREAM ON NORMAL SKIN

## TEST REPORT

We have performed the following test procedures as a contract project for the company SkinCare Consulting ApS, Majaslund, Løvenborgvej 18, DK4220 Regstrup.

### Test products

The following products were made available by the contractor and were delivered in unbroken original containers. All test products were commercially available.

1. Warming basiscreme, 250 ml, V, No. 760272, SkinCare Consulting ApS.
2. Locobase fedtcreme, 100 g (12043586/2), Yamanouchi.
3. Ceridal lipogel, 100 g, Preval Dermatica GmbH.

### Test procedures

Tests were performed on control/non-treated areas and on areas treated with the mentioned products. All test sites were on the upper back and each test area was 25 cm<sup>2</sup>. 50 mg (2mg/cm<sup>2</sup>) of the testmaterial was used. Test sites were rotated at random to avoid bias from the test site location on the back. The following tests were performed:

Transepidermal water loss (TEWL) was measured by means of an evaporimeter EP1, Servo Med.

Destensibility was measured by a dermaflex A, Cortex Technology.

Elasticity was measured by a dermaflex A, Cortex Technology.

Hysteresis was measured by a dermaflex A, Cortex Technology.

Capacitance was measured by a corneometer, CM 820, Courage + Khazaka.

Greasiness was measured after 2 minutes of blotting and weighing of the blotting paper.

All measurements were performed before and 20 minutes after application of the test substances.

### **Test persons**

16 test persons with normal skin were recruited from the laboratory and from the local nursing school. The testing was approved by the Ethics Committee, registration No. KF02169/97.

### **Results and comments**

The results of the tests are summarised in table 1-6.

Elasticity, distensibility and hysteresis are measures of the plasticity of the skin, presumably caused by changes in the stratum corneum. Both distensibility and elasticity were improved by Warming (table 1A – 3A). Hysteresis and distensibility were improved by Locobase and Ceridal (table 1A – 3A). Distensibility is improved in all cases (table 2B). For both Locobase, Ceridal and control there was no significant difference to the effect of Warming (table 1C – 3C). TEWL was not changed by any of the products (table 4A – 4B), although Ceridal showed just significant and Locobase almost significantly higher TEWL than Warming (table 4C). Warming thus was associated with less water loss than the other substances.

The corneometer measures the change in skin capacitance of the superficial stratum corneum and is influenced by the water content and lipid content of the skin. All substances gave a lowering of the values, Warming only giving little or no change (table 5A – 5B). This may be caused by the lower TEWL – better water holding property of the Warming cream, especially compared to Ceridal (table 5C).

Greasiness is pronounced for Locobase and Ceridal (table 6A). Table 6B and 6C indicates, despite the results for table 6A, that Warming is more greasy than Locobase and Ceridal, but all substances are found in excess amounts on the skin even 20 minutes after exposure.

Greasiness, however, might be better evaluated after deduction of the water content in the products, and that might change the relations between the greasiness of the different products.

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**TABLE 1**  
**ELASTICITY**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | 4.87                   | 1.75       | 2.79     | 0.014                   |
| Locobase     | -3.13                  | 2.31       | -1.36    | 0,195 n.s.              |
| Ceridal      | -4.50                  | 2.24       | -2.01    | 0,062 n.s.              |
| Control      | 0.00                   | 2.29       | 0.00     | 1.00 n.s.               |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | +3.13                  | 3.65       | 1.0 n.s.                |
| Locobase     | -4.31                  | 3.65       | 1.0 n.s.                |
| Ceridal      | -4.81                  | 3.65       | 1.0 n.s.                |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | 7.44                   | 3.65       | 0.45 n.s.               |
| Ceridal      | 7.94                   | 3.65       | 0.33 n.s.               |
| Control      | 3.13                   | 3.65       | 1.0 n.s.                |

**TABLE 2**  
**DISTENSIBILITY**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | 0.36                   | 0.082      | 4.32     | 0.001                   |
| Locobase     | 0.52                   | 0.126      | 4.14     | 0.001                   |
| Ceridal      | 0.44                   | 0.075      | 5.88     | 0.000                   |
| Control      | -0.04                  | 0.060      | -0.67    | 0.515 n.s.              |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | +0.614                 | 0.17       | 0.006                   |
| Locobase     | +0.771                 | 0.17       | 0.000                   |
| Ceridal      | +0.640                 | 0.17       | 0.004                   |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | -0.157                 | 0.171      | 1.0 n.s.                |
| Ceridal      | -0.026                 | 0.171      | 1.0 n.s.                |
| Control      | 0.614                  | 0.171      | 0.006                   |

**TABLE 3**  
**HYSTERESIS**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | 0.032                  | 0.023      | 1.38     | 0.189 n.s.              |
| Locobase     | 0.078                  | 0.011      | 7.13     | 0.000                   |
| Ceridal      | 0.111                  | 0.016      | 6.88     | 0.000                   |
| Control      | 0.019                  | 0.017      | 1.13     | 0.277 n.s.              |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | +0.0619                | 0.023      | 0.093 n.s.              |
| Locobase     | +0.0756                | 0.023      | 0.017                   |
| Ceridal      | +0.111                 | 0.023      | 0.000                   |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | -0.0137                | 0.023      | 1.0 n.s.                |
| Ceridal      | -0.0494                | 0.023      | 0.36 n.s.               |
| Control      | +0.0618                | 0.023      | 0.93 n.s.               |

TABLE 4

**TRANSEPIDERMAL WATER LOSS (TEWL)**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | -0.194                 | 0.562      | -0.344   | 0.735 n.s.              |
| Locobase     | -0.138                 | 0.668      | -0.206   | 0.840 n.s.              |
| Ceridal      | -0.400                 | 0.718      | -0.557   | 0.585 n.s.              |
| Control      | -0.069                 | 0.451      | -0.153   | 0.881 n.s.              |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | -0.30                  | 0.638      | 1.0 n.s.                |
| Locobase     | +1.52                  | 0.638      | 0.20 n.s.               |
| Ceridal      | +1.63                  | 0.638      | 0.13 n.s.               |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | -1.82                  | 0.638      | 0.056 n.s.              |
| Ceridal      | -1.93                  | 0.638      | 0.034                   |
| Control      | -0.30                  | 0.638      | 1.00 n.s.               |

**TABLE 5**  
**CORNEOMETER**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | -6.25                  | 2.77       | -2.26    | 0.039                   |
| Locobase     | -12.06                 | 4.30       | -2.81    | 0.013                   |
| Ceridal      | -25.13                 | 3.44       | -7.31    | 0.000                   |
| Control      | 3.63                   | 1.45       | 2.49     | 0.025                   |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | -10.88                 | 4.97       | 0.317 n.s.              |
| Locobase     | -15.63                 | 4.97       | 0.024                   |
| Ceridal      | -29.06                 | 4.97       | 0.000                   |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | 4.75                   | 4.97       | 1.0 n.s.                |
| Ceridal      | 18.18                  | 4.97       | 0.005                   |
| Control      | -10.88                 | 4.97       | 0.32 n.s.               |

TABLE 6  
**GREASINESS**

**A**

Difference between the measurements in the same area before and after cream (n = 16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>t</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|----------|-------------------------|
| Warming      | -0.0035                | 0.0018     | -1.93    | 0.073 n.s.              |
| Locobase     | -0.0141                | 0.0016     | 8.91     | 0.000                   |
| Ceridal      | 0.0236                 | 0.0014     | 17.11    | 0.000                   |
| Control      | -0.0001                |            |          | n.s.                    |

**B**

Comparison between cream area and control area without cream (t-test, n=16).

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Warming      | +0.0268                | 0.001      | 0.000                   |
| Locobase     | +0.0179                | 0.001      | 0.000                   |
| Ceridal      | +0.0132                | 0.001      | 0.000                   |

**C**

Relation between WARMING cream and the other test substances

| <i>Cream</i> | <i>Mean difference</i> | <i>SEM</i> | <i>Significance (p)</i> |
|--------------|------------------------|------------|-------------------------|
| Locobase     | 0.0088                 | 0.001      | 0.000                   |
| Ceridal      | 0.0136                 | 0.001      | 0.000                   |
| Control      | 0.0268                 | 0.001      | 0.000                   |