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CollTech Ltd.
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date:

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Dermatological expertise on a
HYDRATION DETERMINATION
using a CORNEOMETER

OVICOLL/Clear (5%)

Client: CollTech Ltd.
76 Kings Park Rd. West Perth
WA 6005 Australia

Test persons: 20 females, all with healthy skin

Test areas: right half of the face

Test period: 4 weeks, application twice a day

Measurement points: 1 hour after first application, and then weekly measurements.
Weekly measurements as follows:
8 – 10 hrs after last application, then an application follows, 1
hour after this a new measurement follows.

1. SKIN MOISTURE MEASUREMENTS

With the corneometer principle, the skin moisture of the outer layer of the skin (Stratum corneum) is determined by means of a capacity measurement. This principle is based on the fact that the dielectric constants of water and other materials are different. A relevantly shaped measuring capacitor reacts with differing capacity changes to the measurement volume that the probe has been placed on, that the equipment automatically recognises and evaluates. The active probe that is coated in special glass is pressed against the skin position to be measured and after 1 second the value is displayed on the corneometer as well as the degree of moisture on the upper skin. The special construction guarantees that the active forepart of the probe is always pressed down with constant pressure, even against any inadequate skin positions.

The corneometer consists of a desk housing and the associated probe. This is connected to the desk housing that has a special socket for the helix cable. In the desk housing the measured values are displayed to a maximum of three decimal places. In addition to this, the display also fulfils other information functions.

The measurement sensor is of rectangular shape. The special glass coating on the active forepart can be moved axially and has a stroke of at least 3mm. The measuring principle requires the plane of the forepart to lay with constant pressure. In order to guarantee the best reproduction of this, the forepart of the measurement probe has to be very small (7 x 7 mm). The internal moving part - the active forepart - is pressed against the skin by a spring which is always at 3.5N.

The corneometer works completely automatically. In order to undertake a measurement, the measuring head must be pressed against the skin position to be measured. After one second the measured value will be displayed.

The value displayed on the corneometer gives the degree of moisture on the surface of the skin, e.g. before and after the skin was treated with cosmetics or pharmaceutical products, i.e. the unit displays the status or the change in the moisture on the surface of the skin.

The measurements are performed in a defined period after the application.

The relevant tables contain the determined values.

1.2 WORKING PROCEDURES FOR MEASURING THE SKIN MOISTURE

1. The subjects were instructed only to apply the cosmetic preparation being tested on the relevant pre-determined skin areas during the application period.
2. The test persons were acclimatised for 45 minutes at a temperature of 22 degrees centigrade and 60% relative humidity.
3. Skin measurement values were measured at three different places inside the respective testing areas.
4. For this experiment, an untouched skin area of the forehead was used as control measurement area.
5. Measurements were taken at the start and within a 4 weeks interval of product application (twice a day). 1 hour after the first application a corneometric measurement is taken and then weekly measurements follow. Weekly measurements are taken as follows (at days 7, 14, 21, 28) 8 – 10 hrs after last application (Measurements are called after 1 week, after 2 weeks, after 3 weeks and after 4 weeks) then a single application follows and 1 hour after this a further measurement is taken. These measurements are called after 3 weeks plus 1 hour etc.

1.2 EVALUATION AND STATISTICS

The skin moistness value per test area and the time were also standardised. The respective values can be found in the attached tables.

With regards to the subjects, they were specified by incrementing numbers, age and sex, standardised and the normal deviations were determined.

(Literature: L. Sachs, "Statistical Methods", 6th edition, Springer Verlag, Berlin & Heidelberg 1988).

delta = Differences between the skin moistness - or - fat values
delta(%) = average percentage moisture change caused by the application,
with reference to the starting value.

The corresponding table contains the respective values that were found.

2. RESULTS OF THE EXPERIMENT

2.1. DERMATOLOGIC EXAMINATION

Subjects were only allowed to participate in the test without any signs of pathological changes in the facial area.

None of the test persons experienced irritations in the treated area during the application time.

Test persons:

No.	Name	Gender	Age
1.	Je. Be.	f	72
2.	Ka. Bo.	f	27
3.	Ve. Bo.	f	20
4.	Ne. Fi.	f	73
5.	Ly. Gr.	f	48
6.	Ma. Ho.	f	25
7.	Ta. Ku.	f	20
8.	He. Re.	f	65
9.	He. Ro.	f	34
10.	He. Ro.	f	73
11.	In. Ro.	f	34
12.	Ka. Sch.	f	27
13.	Ka. Sch.	f	27
14.	Sa. Sch.-No.	f	29
15.	Ga. Sch.	f	39
16.	He. St.	f	56
17.	Mi. St.	f	30
18.	Ju. Te.	f	62
19.	Be. Te.	f	44
20.	Do. Th.	f	51

Corneometry
OVICOLL/Clear (5%)

2.2. SKIN MOISTURE MEASUREMENTS

2.2.1.1 Skin moisture measurements before begin of test period and 1 hour after first application of **OVICOLL/Clear (5%)**

Subjects	start	after 1 hour	difference	delta/percent
1.	32,33	35,53	3,20	9,90
2.	28,70	30,13	1,43	4,98
3.	40,37	41,57	1,20	2,97
4.	23,97	26,33	2,36	9,85
5.	16,63	19,27	2,64	15,87
6.	35,23	37,53	2,30	6,53
7.	27,33	29,13	1,80	6,59
8.	31,43	35,33	3,90	12,41
9.	16,10	19,43	3,33	20,68
10.	49,33	52,10	2,77	5,62
11.	36,70	39,60	2,90	7,90
12.	19,60	22,33	2,73	13,93
13.	16,50	18,53	2,03	12,30
14.	42,13	45,37	3,24	7,69
15.	38,53	40,07	1,54	4,00
16.	29,57	31,50	1,93	6,53
17.	35,53	38,67	3,14	8,84
18.	42,90	44,37	1,47	3,43
19.	18,27	20,63	2,36	12,92
20.	15,33	18,60	3,27	21,33
average	29,82	32,30	2,48	9,71
Minimum	15,33	18,53	18,53	2,97
Maximum	49,33	52,10	52,10	21,33
Stand.dev.	10,36	10,25	10,25	5,28
Variance	107,25	105,00	105,00	27,91
Change of average value 9,71 %:				

Corneometry
OVICOLL/Clear (5%)

2.2.1.2 Skin moisture measurements before begin of test period and 1 hour after first application – Untreated control area

Subjects	start	after 1 hour	difference	delta/percent
1.	30,50	29,47	-1,03	-3,38
2.	28,40	30,23	1,83	6,44
3.	41,60	42,33	0,73	1,75
4.	23,50	24,57	1,07	4,55
5.	18,40	17,23	-1,17	-6,36
6.	32,82	34,97	2,15	6,55
7.	25,47	27,40	1,93	7,58
8.	30,43	32,40	1,97	6,47
9.	16,53	18,40	1,87	11,31
10.	55,23	49,20	-6,03	-10,92
11.	37,47	39,50	2,03	5,42
12.	21,60	19,57	-2,03	-9,40
13.	14,60	16,73	2,13	14,59
14.	42,17	43,40	1,23	2,92
15.	39,67	41,07	1,40	3,53
16.	28,50	31,57	3,07	10,77
17.	36,57	39,60	3,03	8,29
18.	40,50	43,40	2,90	7,16
19.	22,03	21,20	-0,83	-3,77
20.	15,47	13,50	-1,97	-12,73
average	30,07	30,79	30,79	2,54
Minimum	14,60	13,50	13,50	-12,73
Maximum	55,23	49,20	49,20	14,59
Stand. dev.	10,75	10,70	10,70	7,75
Variance	115,59	114,42	114,42	60,08
Change of average value 2,54 %				

Corneometry
OVICOLL/Clear (5%)

2.2.2.1 Skin moisture measurements before begin of test period and after one week of application of test product. 8 – 10 hours after last application of **OVICOLL(Clear (5%))**

Subjects	start	after 1 week	difference	delta/percent
1.	32,33	38,42	6,09	18,84
2.	28,70	32,61	3,91	13,62
3.	40,37	44,62	4,25	10,53
4.	23,97	28,84	4,87	20,32
5.	16,63	22,31	5,68	34,16
6.	35,23	39,16	3,93	11,16
7.	27,33	33,62	6,29	23,02
8.	31,43	38,82	7,39	23,51
9.	16,10	22,42	6,32	39,25
10.	49,33	56,62	7,29	14,78
11.	36,70	42,37	5,67	15,45
12.	19,60	25,62	6,02	30,71
13.	16,50	19,62	3,12	18,91
14.	42,13	46,62	4,49	10,66
15.	38,53	44,42	5,89	15,29
16.	29,57	35,62	6,05	20,46
17.	35,53	42,24	6,71	18,89
18.	42,90	46,62	3,72	8,67
19.	18,27	25,52	7,25	39,68
20.	15,33	22,42	7,09	46,25
average	29,82	35,43	5,60	21,71
Minimum	15,33	19,62	3,12	8,67
Maximum	49,33	56,62	7,39	46,25
Stand.dev.	10,36	10,27	1,32	10,82
Variance	107,25	105,44	1,73	117,05
Change of average value 21,71 %				

Corneometry
OVICOLL/Clear (5%)

2.2.2.2 Skin moisture measurements before begin of test period and after one week of application of test product. **Untreated control area.**

Subjects	start	after 1 week	difference	delta/percent
1.	30,50	32,23	1,73	5,67
2.	28,40	29,88	1,48	5,21
3.	41,60	40,56	-1,04	-2,50
4.	23,50	26,12	2,62	11,15
5.	18,40	16,86	-1,54	-8,37
6.	32,82	33,12	0,30	0,91
7.	25,47	24,42	-1,05	-4,12
8.	30,43	34,62	4,19	13,77
9.	16,53	15,52	-1,01	-6,11
10.	55,23	56,12	0,89	1,61
11.	37,47	38,24	0,77	2,05
12.	21,60	22,45	0,85	3,94
13.	14,60	15,54	0,94	6,44
14.	42,17	41,28	-0,89	-2,11
15.	39,67	42,46	2,79	7,03
16.	28,50	26,82	-1,68	-5,89
17.	36,57	37,00	0,43	1,18
18.	40,50	41,24	0,74	1,83
19.	22,03	20,52	-1,51	-6,85
20.	15,47	16,62	1,15	7,43
average	30,07	30,58	0,51	1,61
Minimum	14,60	15,52	-1,68	-8,37
Maximum	55,23	56,12	4,19	13,77
Stand.dev.	10,75	11,06	1,60	6,12
Variance	115,59	122,23	2,57	37,48
Change of average value 1,61 %				

Corneometry
OVICOLL/Clear (5%)

2.2.2.3 Skin moisture measurements before begin of test period and after one week of application of test product. 1 hour after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 1 week plus 1 hour	difference	delta/percent
1.	32,33	38,22	5,89	18,22
2.	28,70	34,24	5,54	19,30
3.	40,37	46,22	5,85	14,49
4.	23,97	30,21	6,24	26,03
5.	16,63	23,32	6,69	40,23
6.	35,23	40,11	4,88	13,85
7.	27,33	34,62	7,29	26,67
8.	31,43	40,24	8,81	28,03
9.	16,10	25,36	9,26	57,52
10.	49,33	58,82	9,49	19,24
11.	36,70	44,42	7,72	21,04
12.	19,60	26,42	6,82	34,80
13.	16,50	21,12	4,62	28,00
14.	42,13	47,62	5,49	13,03
15.	38,53	45,52	6,99	18,14
16.	29,57	35,12	5,55	18,77
17.	35,53	43,68	8,15	22,94
18.	42,90	47,11	4,21	9,81
19.	18,27	25,91	7,64	41,82
20.	15,33	23,61	8,28	54,01
average	29,82	36,59	6,77	26,30
Minimum	15,33	21,12	4,21	9,81
Maximum	49,33	58,82	9,49	57,52
Stand.dev.	10,36	10,31	1,54	13,23
Variance	107,25	106,25	2,38	174,95
Change of average value 26,30 %				

Corneometry
OVICOLL/Clear (5%)

2.2.2.4 Skin moisture measurements before begin of test period and after one week of application of test product. **Untreated control area** 1 hour later than 2.2.2.2.

Subjects	start	after 1 week plus 1 hour	difference	delta/percent
1.	30,50	31,52	1,02	3,34
2.	28,40	27,86	-0,54	-1,90
3.	41,60	42,46	0,86	2,07
4.	23,50	24,46	0,96	4,09
5.	18,40	19,24	0,84	4,57
6.	32,82	34,46	1,64	5,00
7.	25,47	27,62	2,15	8,44
8.	30,43	32,68	2,25	7,39
9.	16,53	17,82	1,29	7,80
10.	55,23	54,12	-1,11	-2,01
11.	37,47	35,54	-1,93	-5,15
12.	21,60	20,24	-1,36	-6,30
13.	14,60	13,02	-1,58	-10,82
14.	42,17	45,52	3,35	7,94
15.	39,67	44,42	4,75	11,97
16.	28,50	29,12	0,62	2,18
17.	36,57	38,42	1,85	5,06
18.	40,50	43,63	3,13	7,73
19.	22,03	25,42	3,39	15,39
20.	15,47	27,25	11,78	76,15
average	30,07	31,74	1,67	7,15
Minimum	14,60	13,02	-1,93	-10,82
Maximum	55,23	54,12	11,78	76,15
Stand.dev.	10,75	10,66	2,98	17,42
Variance	115,59	113,68	8,90	303,47
Change of average value 7,15 %				

Corneometry
OVICOLL/Clear (5%)

2.2.3.1 Skin moisture measurements before begin of test period and after two weeks of application of test product. 8 – 10 hours after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 2 weeks	difference	delta/percent
1.	32,33	38,64	6,31	19,52
2.	28,70	34,86	6,16	21,46
3.	40,37	46,84	6,47	16,03
4.	23,97	29,88	5,91	24,66
5.	16,63	23,68	7,05	42,39
6.	35,23	40,98	5,75	16,32
7.	27,33	35,02	7,69	28,14
8.	31,43	40,92	9,49	30,19
9.	16,10	24,26	8,16	50,68
10.	49,33	59,02	9,69	19,64
11.	36,70	43,98	7,28	19,84
12.	19,60	26,86	7,26	37,04
13.	16,50	21,86	5,36	32,48
14.	42,13	47,99	5,86	13,91
15.	38,53	45,12	6,59	17,10
16.	29,57	34,88	5,31	17,96
17.	35,53	43,12	7,59	21,36
18.	42,90	47,88	4,98	11,61
19.	18,27	25,78	7,51	41,11
20.	15,33	24,02	8,69	56,69
average	29,82	36,78	6,96	26,91
Minimum	15,33	21,86	4,98	11,61
Maximum	49,33	59,02	9,69	56,69
Stand.dev.	10,36	10,35	1,34	12,72
Variance	107,25	107,14	1,80	161,69
Change of average value 26,91 %				

Corneometry
OVICOLL/Clear (5%)

2.2.3.2 Skin moisture measurements before begin of test period and after two weeks of application of test product. **Untreated control area.**

Subjects	start	after 2 weeks	difference	delta/percent
1.	30,50	30,11	-0,39	-1,28
2.	28,40	28,12	-0,28	-0,99
3.	41,60	40,98	-0,62	-1,49
4.	23,50	24,88	1,38	5,87
5.	18,40	17,56	-0,84	-4,57
6.	32,82	33,32	0,50	1,52
7.	25,47	26,66	1,19	4,67
8.	30,43	31,22	0,79	2,60
9.	16,53	16,22	-0,31	-1,88
10.	55,23	55,46	0,23	0,42
11.	37,47	36,78	-0,69	-1,84
12.	21,60	22,12	0,52	2,41
13.	14,60	14,22	-0,38	-2,60
14.	42,17	43,36	1,19	2,82
15.	39,67	42,24	2,57	6,48
16.	28,50	29,89	1,39	4,88
17.	36,57	38,24	1,67	4,57
18.	40,50	42,27	1,77	4,37
19.	22,03	23,84	1,81	8,22
20.	15,47	19,29	3,82	24,69
average	30,07	30,84	0,77	2,94
Minimum	14,60	14,22	-0,84	-4,57
Maximum	55,23	55,46	3,82	24,69
Stand.dev.	10,75	10,78	1,23	6,19
Variance	115,59	116,28	1,50	38,33
Change of average value 2,94 %				

Corneometry
OVICOLL/Clear (5%)

2.2.3.3 Skin moisture measurements before begin of test period and after two weeks of application of test product. 1 hour after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 2 weeks plus 1 hour	difference	delta/percent
1.	32,33	39,12	6,79	21,00
2.	28,70	35,02	6,32	22,02
3.	40,37	47,12	6,75	16,72
4.	23,97	30,22	6,25	26,07
5.	16,63	24,11	7,48	44,98
6.	35,23	41,24	6,01	17,06
7.	27,33	35,46	8,13	29,75
8.	31,43	41,24	9,81	31,21
9.	16,10	23,88	7,78	48,32
10.	49,33	59,89	10,56	21,41
11.	36,70	44,02	7,32	19,95
12.	19,60	27,12	7,52	38,37
13.	16,50	22,21	5,71	34,61
14.	42,13	48,12	5,99	14,22
15.	38,53	45,24	6,71	17,42
16.	29,57	35,22	5,65	19,11
17.	35,53	43,89	8,36	23,53
18.	42,90	48,12	5,22	12,17
19.	18,27	26,24	7,97	43,62
20.	15,33	24,81	9,48	61,84
average	29,82	37,11	7,29	28,17
Minimum	15,33	22,21	5,22	12,17
Maximum	49,33	59,89	10,56	61,84
Stand.dev.	10,36	10,39	1,45	13,28
Variance	107,25	108,05	2,11	176,31
Change of average value 28,17 %				

Corneometry
OVICOLL/Clear (5%)

2.2.3.4 Skin moisture measurements before begin of test period and after two weeks of application of test product. **Untreated control area** 1 hr later than 2.2.3.2.

Subjects	start	after 2 week plus 1 hour	difference	delta/percent
1.	30,50	31,24	0,74	2,43
2.	28,40	27,89	-0,51	-1,80
3.	41,60	40,65	-0,95	-2,28
4.	23,50	25,24	1,74	7,40
5.	18,40	17,23	-1,17	-6,36
6.	32,82	34,55	1,73	5,27
7.	25,47	24,89	-0,58	-2,28
8.	30,43	32,64	2,21	7,26
9.	16,53	17,24	0,71	4,30
10.	55,23	54,84	-0,39	-0,71
11.	37,47	38,86	1,39	3,71
12.	21,60	21,12	-0,48	-2,22
13.	14,60	15,66	1,06	7,26
14.	42,17	44,62	2,45	5,81
15.	39,67	40,26	0,59	1,49
16.	28,50	27,78	-0,72	-2,53
17.	36,57	35,52	-1,05	-2,87
18.	40,50	39,98	-0,52	-1,28
19.	22,03	23,64	1,61	7,31
20.	15,47	18,87	3,40	21,98
average	30,07	30,64	0,56	2,59
Minimum	14,60	15,66	-1,17	-6,36
Maximum	55,23	54,84	3,40	21,98
Stand.dev.	10,75	10,54	1,34	6,24
Variance	115,59	111,16	1,81	38,93

Change of average value 2,59 %

Corneometry
OVICOLL/Clear (5%)

2.2.4.1 Skin moisture measurements before begin of test period and after three weeks of application of test product. 8 – 10 hours after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 3 weeks	difference	delta/percent
1.	32,33	40,22	7,89	24,40
2.	28,70	35,89	7,19	25,05
3.	40,37	48,26	7,89	19,54
4.	23,97	31,24	7,27	30,33
5.	16,63	24,56	7,93	47,68
6.	35,23	42,22	6,99	19,84
7.	27,33	36,33	9,00	32,93
8.	31,43	42,44	11,01	35,03
9.	16,10	24,52	8,42	52,30
10.	49,33	60,12	10,79	21,87
11.	36,70	44,98	8,28	22,56
12.	19,60	27,86	8,26	42,14
13.	16,50	21,98	5,48	33,21
14.	42,13	49,26	7,13	16,92
15.	38,53	44,99	6,46	16,77
16.	29,57	35,86	6,29	21,27
17.	35,53	44,12	8,59	24,18
18.	42,90	49,20	6,30	14,69
19.	18,27	27,24	8,97	49,10
20.	15,33	24,10	8,77	57,21
average	29,82	37,77	7,95	30,35
Minimum	15,33	21,98	5,48	14,69
Maximum	49,33	60,12	11,01	57,21
Stand.dev.	10,36	10,54	1,41	12,95
Variance	107,25	111,13	1,97	167,61
Change of average value 30,35 %				

Corneometry
OVICOLL/Clear (5%)

2.2.4.2 Skin moisture measurements before begin of test period and after three weeks of application of test product. **Untreated control area.**

Subjects	start	after 3 weeks	difference	delta/percent
1.	30,50	30,88	0,38	1,25
2.	28,40	28,62	0,22	0,77
3.	41,60	39,99	-1,61	-3,87
4.	23,50	24,23	0,73	3,11
5.	18,40	19,11	0,71	3,86
6.	32,82	31,56	-1,26	-3,84
7.	25,47	26,12	0,65	2,55
8.	30,43	31,52	1,09	3,58
9.	16,53	16,89	0,36	2,18
10.	55,23	53,68	-1,55	-2,81
11.	37,47	39,12	1,65	4,40
12.	21,60	22,24	0,64	2,96
13.	14,60	15,56	0,96	6,58
14.	42,17	43,33	1,16	2,75
15.	39,67	41,24	1,57	3,96
16.	28,50	27,12	-1,38	-4,84
17.	36,57	37,24	0,67	1,83
18.	40,50	41,12	0,62	1,53
19.	22,03	22,26	0,23	1,04
20.	15,47	17,82	2,35	15,19
average	30,07	30,48	0,41	2,11
Minimum	14,60	15,56	-1,61	-4,84
Maximum	55,23	53,68	2,35	15,19
Stand.dev.	10,75	10,39	1,09	4,32
Variance	115,59	107,93	1,18	18,68
Change of average value 2,11 %				

Corneometry
OVICOLL/Clear (5%)

2.2.4.3 Skin moisture measurements before begin of test period and after three weeks of application of test product. 1 hour after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 3 weeks plus 1 hour	difference	delta/percent
1.	32,33	41,26	8,93	27,62
2.	28,70	36,12	7,42	25,85
3.	40,37	49,23	8,86	21,95
4.	23,97	32,24	8,27	34,50
5.	16,63	23,98	7,35	44,20
6.	35,23	42,84	7,61	21,60
7.	27,33	37,22	9,89	36,19
8.	31,43	43,12	11,69	37,19
9.	16,10	23,98	7,88	48,94
10.	49,33	61,12	11,79	23,90
11.	36,70	45,52	8,82	24,03
12.	19,60	27,12	7,52	38,37
13.	16,50	22,64	6,14	37,21
14.	42,13	50,24	8,11	19,25
15.	38,53	45,62	7,09	18,40
16.	29,57	36,42	6,85	23,17
17.	35,53	45,24	9,71	27,33
18.	42,90	50,86	7,96	18,55
19.	18,27	26,98	8,71	47,67
20.	15,33	23,99	8,66	56,49
average	29,82	38,29	8,46	31,62
Minimum	15,33	22,64	6,14	18,40
Maximum	49,33	61,12	11,79	56,49
Stand.dev.	10,36	11,02	1,46	11,29
Variance	107,25	121,39	2,12	127,38
Change of average value 31,62 %				

**Corneometry
OVICOLL/Clear (5%)**

2.2.4.4 Skin moisture measurements before begin of test period and after three weeks of application of test product. **Untreated control area** 1 hour later than 2.2.4.2.

Subjects	start	after 3 weeks plus 1 hour	difference	delta/percent
1.	30,50	31,12	0,62	2,03
2.	28,40	27,89	-0,51	-1,80
3.	41,60	42,21	0,61	1,47
4.	23,50	22,64	-0,86	-3,66
5.	18,40	19,12	0,72	3,91
6.	32,82	33,42	0,60	1,83
7.	25,47	26,89	1,42	5,58
8.	30,43	30,89	0,46	1,51
9.	16,53	17,42	0,89	5,38
10.	55,23	54,63	-0,60	-1,09
11.	37,47	38,86	1,39	3,71
12.	21,60	22,89	1,29	5,97
13.	14,60	15,12	0,52	3,56
14.	42,17	44,65	2,48	5,88
15.	39,67	40,26	0,59	1,49
16.	28,50	29,23	0,73	2,56
17.	36,57	35,23	-1,34	-3,66
18.	40,50	42,46	1,96	4,84
19.	22,03	23,36	1,33	6,04
20.	15,47	16,25	0,78	5,04
average	30,07	30,73	0,65	2,53
Minimum	14,60	15,12	-1,34	-3,66
Maximum	55,23	54,63	2,48	6,04
Stand.dev.	10,75	10,74	0,93	3,09
Variance	115,59	115,29	0,86	9,54
Change of average value 2,53 %				

Corneometry
OVICOLL/Clear (5%)

2.2.5.1 Skin moisture measurements before begin of test period and after four weeks of application of test product. 8 – 10 hours after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 4 weeks	difference	delta/percent
1.	32,33	42,44	10,11	31,27
2.	28,70	37,62	8,92	31,08
3.	40,37	51,24	10,87	26,93
4.	23,97	33,13	9,16	38,21
5.	16,63	23,12	6,49	39,03
6.	35,23	44,42	9,19	26,09
7.	27,33	37,24	9,91	36,26
8.	31,43	44,24	12,81	40,76
9.	16,10	23,12	7,02	43,60
10.	49,33	61,46	12,13	24,59
11.	36,70	45,88	9,18	25,01
12.	19,60	26,76	7,16	36,53
13.	16,50	23,12	6,62	40,12
14.	42,13	51,12	8,99	21,34
15.	38,53	47,11	8,58	22,27
16.	29,57	37,16	7,59	25,67
17.	35,53	44,46	8,93	25,13
18.	42,90	51,46	8,56	19,95
19.	18,27	27,10	8,83	48,33
20.	15,33	22,99	7,66	49,97
average	29,82	38,76	8,94	32,61
Minimum	15,33	22,99	6,49	19,95
Maximum	49,33	61,46	12,81	49,97
Stand.dev.	10,36	11,50	1,68	9,16
Variance	107,25	132,31	2,81	83,82
Change of average value 32,61 %				

Corneometry
OVICOLL/Clear (5%)

2.2.5.2 Skin moisture measurements before begin of test period and after four weeks of application of test product. **Untreated control area.**

Subjects	start	after 4 weeks	difference	delta/percent
1.	30,50	32,24	1,74	5,70
2.	28,40	28,86	0,46	1,62
3.	41,60	40,66	-0,94	-2,26
4.	23,50	20,65	-2,85	-12,13
5.	18,40	19,89	1,49	8,10
6.	32,82	32,54	-0,28	-0,85
7.	25,47	26,62	1,15	4,52
8.	30,43	31,12	0,69	2,27
9.	16,53	17,34	0,81	4,90
10.	55,23	56,64	1,41	2,55
11.	37,47	36,62	-0,85	-2,27
12.	21,60	23,32	1,72	7,96
13.	14,60	15,46	0,86	5,89
14.	42,17	43,36	1,19	2,82
15.	39,67	41,11	1,44	3,63
16.	28,50	29,01	0,51	1,79
17.	36,57	35,66	-0,91	-2,49
18.	40,50	42,12	1,62	4,00
19.	22,03	22,88	0,85	3,86
20.	15,47	16,54	1,07	6,92
average	30,07	30,63	0,56	2,33
Minimum	14,60	15,46	-2,85	-12,13
Maximum	55,23	56,64	1,74	8,10
Stand.dev.	10,75	10,77	1,17	4,67
Variance	115,59	116,01	1,38	21,79
Change of average value 2,33 %				

Corneometry
OVICOLL/Clear (5%)

2.2.5.3 Skin moisture measurements before begin of test period and after four weeks of application of test product. 1 hour after last application of **OVICOLL/Clear (5%)**

Subjects	start	after 4 weeks plus 1 hour	difference	delta/percent
1.	32,33	42,89	10,56	32,66
2.	28,70	38,01	9,31	32,44
3.	40,37	52,12	11,75	29,11
4.	23,97	32,88	8,91	37,17
5.	16,63	22,99	6,36	38,24
6.	35,23	45,62	10,39	29,49
7.	27,33	36,99	9,66	35,35
8.	31,43	45,11	13,68	43,53
9.	16,10	22,99	6,89	42,80
10.	49,33	61,46	12,13	24,59
11.	36,70	45,88	9,18	25,01
12.	19,60	26,76	7,16	36,53
13.	16,50	23,12	6,62	40,12
14.	42,13	51,12	8,99	21,34
15.	38,53	47,11	8,58	22,27
16.	29,57	37,16	7,59	25,67
17.	35,53	44,46	8,93	25,13
18.	42,90	51,46	8,56	19,95
19.	18,27	27,10	8,83	48,33
20.	15,33	22,99	7,66	49,97
average	29,82	38,91	9,09	32,98
Minimum	15,33	22,99	6,36	19,95
Maximum	49,33	61,46	13,68	49,97
Stand.dev.	10,36	11,64	1,90	9,01
Variance	107,25	135,59	3,62	81,19
Change of average value 32,98 %				

Corneometry
OVICOLL/Clear (5%)

2.2.5.4 Skin moisture measurements before begin of test period and after four weeks of application of test product. **Untreated control area** 1 hrs later than 2.2.5.2.

Subjects	start	after 4 weeks plus 1 hour	difference	delta/percent
1.	30,50	31,98	1,48	4,85
2.	28,40	29,01	0,61	2,15
3.	41,60	39,99	-1,61	-3,87
4.	23,50	22,24	-1,26	-5,36
5.	18,40	19,22	0,82	4,46
6.	32,82	31,99	-0,83	-2,53
7.	25,47	25,24	-0,23	-0,90
8.	30,43	31,88	1,45	4,77
9.	16,53	17,11	0,58	3,51
10.	55,23	56,88	1,65	2,99
11.	37,47	36,92	-0,55	-1,47
12.	21,60	22,79	1,19	5,51
13.	14,60	15,23	0,63	4,32
14.	42,17	42,79	0,62	1,47
15.	39,67	41,96	2,29	5,77
16.	28,50	30,12	1,62	5,68
17.	36,57	35,54	-1,03	-2,82
18.	40,50	41,99	1,49	3,68
19.	22,03	23,12	1,09	4,95
20.	15,47	16,24	0,77	4,98
average	30,07	30,61	0,54	2,11
Minimum	14,60	15,23	-1,61	-5,36
Maximum	55,23	56,88	2,29	5,77
Stand.dev.	10,75	10,83	1,10	3,58
Variance	115,59	117,28	1,21	12,83
Change of average value 2,11 %				

**Corneometry
OVICOLL/Clear (5%)**

3.0 Concluding evaluation of the skin moisture measurements

CHANGES OF SKIN MOISTURE

	Product	moisture change in %	after deduction of empty areas in %
after 1 hour	9,71	2,54	7,17
after 1 week	21,71	1,61	20,10
after 1 week plus 1 hour	26,30	7,15	19,15
after 2 weeks	26,91	2,94	23,97
after 2 weeks plus 1 hour	28,17	2,59	25,58
after 3 weeks	30,35	2,11	28,24
after 3 weeks plus 1 hour	31,62	2,53	29,09
after 4 weeks	32,61	2,33	30,28
after 4 weeks plus 1 hour	32,98	2,11	30,87

4.0 ASSESMENT OF THE TEST RESULTS

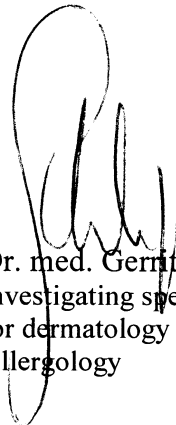
The change in the skin moistness value was determined in the facial area when using the above mentioned preparation for a period of 4 weeks. Measurements were taken at the start and within 4 weeks of testing.

The skin moisture measurements produced an maximum improvement of the skin moisture of **30,87%** in a total testing time of 4 weeks.

The effect on the skin moisture of the **OVICOLL/Clear (5%)** preparation can therefore be classified as *very good*.



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