



## In-vivo Toning Analysis

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**Tradename:** AC DermaPeptide Revitalizing PF

**Code:** 20454PF

**CAS#:** 100209-45-8

**Test Request Form #:** 3400

**Lot #:** 46725P

**Sponsor:** Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092

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**Principle Investigator:** Jennifer Goodman

### Abstract

The efficacy of **AC DermaPeptide Revitalizing PF** was determined by measuring changes in epidermal characteristics such as elasticity and tone before and after a 28 day treatment with a Carbopol gel containing 5.0% **AC DermaPeptide Revitalizing PF**.

### Materials and Methods

A six subject panel of women between the ages of 32 and 58 was asked to apply a mixture containing 5.0% **AC DermaPeptide Revitalizing PF** to their forearms twice daily for 28 days. Subjects abstained from using products on the test site prior to analysis. The SEM 575 Cutometer® was used to non-invasively quantify modifications in epidermal elasticity via suction. The process began by placing the suction probe in contact with the skin for a period of 5 seconds, this was then repeated 5 times consecutively. Sensors at the tip of the probe measured the amount of epidermis drawn into the probe to determine the structural integrity of the epidermis e.g. tensile property. All testing was performed in conjunction with a placebo.

Recorded values pertinent in determining the efficacy of **AC DermaPeptide Revitalizing PF** include: the initial contortion (IC), delayed contortion (DC), tensility ( $T=IC + DC$ ), final tensility ( $T'$ ), epidermal recoil (ER), secondary recoil (mean of cutometer measurements taken 5 times consecutively)( $ER'$ ).

The following formulas were used to analyze results:

Toning:

$$\% \Delta T' = (\text{Day 28 } T' / \text{Day 0 } T) * 100$$

Elasticity:

$$\% \Delta ER = (\text{Day 28 } ER / \text{Day 0 } ER) * 100$$

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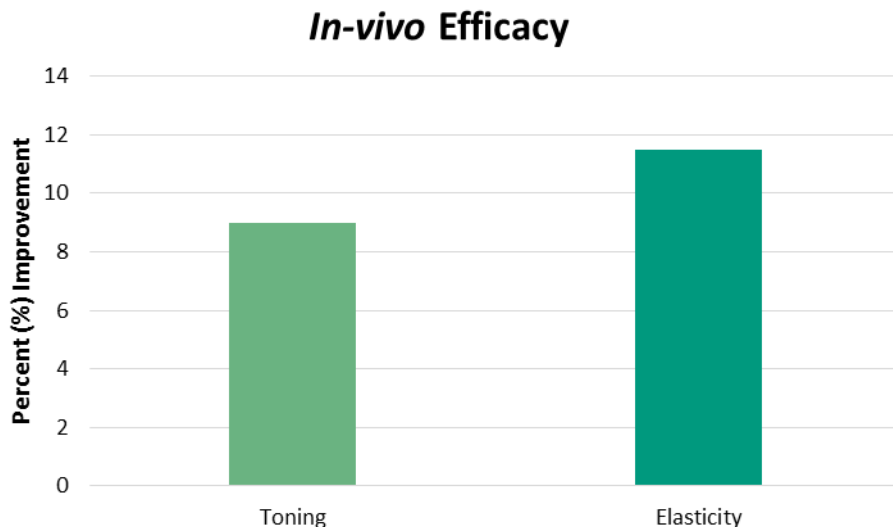
## Results

AC DermaPeptide Revitalizing PF				Placebo		
Volunteer	Day 0	Day 28	change	Day 0	Day 28	change
1	1.023	0.971	-0.052	0.968	0.97	0.002
2	0.851	0.813	-0.038	0.868	0.953	0.085
3	0.842	0.843	0.001	0.793	0.796	0.003
4	1.12	0.989	-0.131	0.876	0.851	-0.025
5	0.937	0.857	-0.08	0.923	0.928	0.005
6	0.827	0.768	-0.059	1.06	1.032	-0.028
mean	0.933	0.874	-0.060	0.915	0.922	0.007

**Figure 1.** Elasticity Assessment

AC DermaPeptide Revitalizing PF				Placebo		
Volunteer	Day 0	Day 28	change	Day 0	Day 28	change
1	0.395	0.387	-0.008	0.425	0.428	0.003
2	0.405	0.357	-0.048	0.369	0.374	0.005
3	0.378	0.362	-0.016	0.353	0.352	-0.001
4	0.342	0.327	-0.015	0.408	0.413	0.005
5	0.356	0.358	0.002	0.321	0.319	-0.002
6	0.348	0.337	-0.011	0.373	0.372	-0.001
mean	0.371	0.355	-0.016	0.375	0.376	0.002

**Figure 2.** Toning Assessment



**Figure 3.** Relationship between improvement in tightness and elasticity  
**AC DermaPeptide Revitalizing PF** and improved skin tone

### Discussion

It is understood that firm skin is elastic and that there is direct relationship between elasticity and recoil. As elasticity improves so does recoil and the values for epidermal recoil decrease as skin becomes toned. The results indicate that **AC DermaPeptide Revitalizing PF** reduces epidermal recoil therefore exhibiting a tightening effect on the skin. The combined improvement in tightness and the decrease in fatigue indicate that **AC DermaPeptide Revitalizing PF** improves skin tone.