CLARIFYING RANGE

TRIAL RESULTS

The Effects of Esse's Clarifying Range on Acne

This four-piece range offers an alternative approach to treating acne by shifting the microbial ecology on skin to favour a healthy, balanced ecosystem with 4 species of live probiotics, Provitamin D and Bakuchiol.

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A study was carried out on 14 female volunteers with acne. These volunteers were given the Clarifying range to use over a 60-day period. During this period, we followed the course of our volunteers' acne, to see how our new Clarifying range performed. The results are covered in this report.

Study Highlights

- **64%** reduction in inflamed lesions in 8 weeks.
- **38%** reduction in acne grading score over 8 weeks.
- **45%** reduction in acne severity in 8 weeks, as self-graded by volunteers.
- **46%** more effective than traditional retinoid (adapalene) treatment.
- **90%** as effective as retinoid & antibiotic combination therapy, without microbiome destruction.
- **Over 30x** less likely to result in adverse reactions than retinoid (tretinoin).

Lesion Counts

We followed the lesion counts of our volunteers throughout the study.
The information below demonstrates what we observed.

Total Lesions

45% reduction in total lesions in 8 weeks

We counted the total lesions on our volunteers' faces over the 60-day period.

The graph below demonstrates the effect that the Clarifying range had on the total lesion counts of our volunteers during the study.

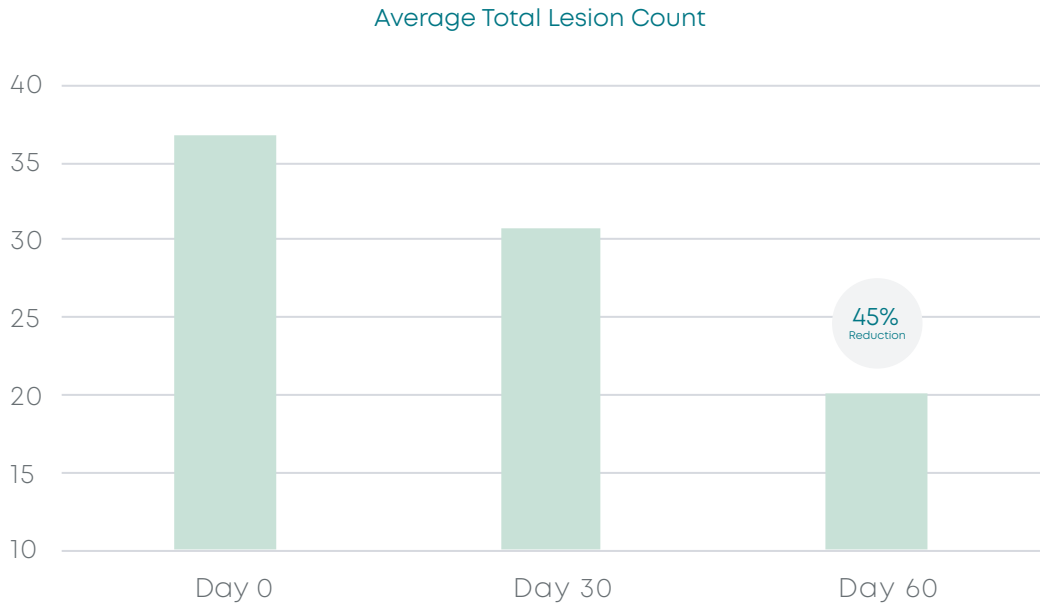

Figure 1 - Average total lesion counts (14 volunteers), over the 60-day period

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Inflamed Lesions

64% reduction in inflamed lesions in 8 weeks

We counted the inflamed lesions on our volunteers' faces over the course of the study.

The Clarifying range is geared towards resolving the inflammation at the root of acne pathogenesis. The results seen for inflammatory lesions are thus a key focus for us.

The graph below demonstrates the effect that the Clarifying range had on the inflamed lesion counts over the 60-day period.

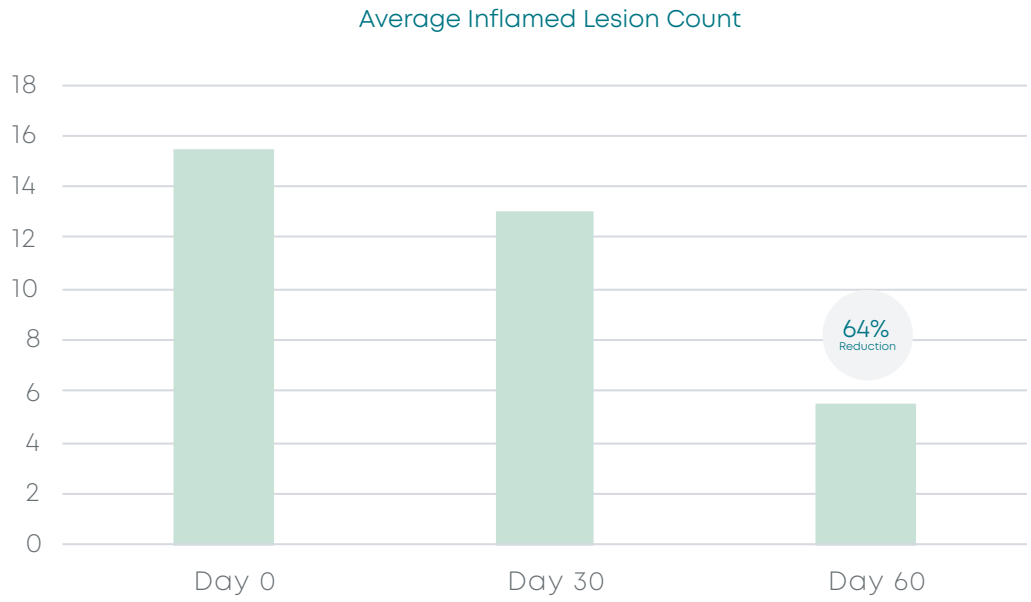

Figure 2 – Average inflamed lesion counts (14 volunteers), over the 60-day period

Non-inflamed Lesions

We counted the non-inflamed lesions on our volunteers' faces over the course of the study.

The graph below demonstrates the effect that the Clarifying range had on the non-inflamed lesion counts over the 60-day period.

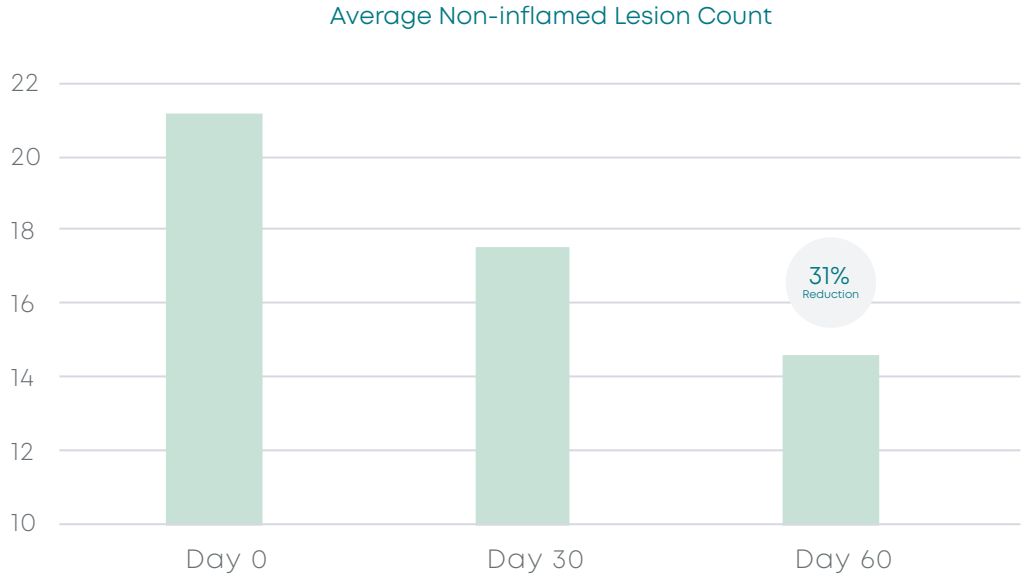

Figure 3 - Average non-inflamed lesion counts (14 volunteers), over the 60-day period

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Efficacy of the Clarifying range versus Topical Retinoid treatment

46% more effective than traditional retinoid (adapalene) treatment

It is useful to compare the efficacy of the clarifying range to that of other acne treatments, as clients will likely prioritise results. Topical retinoids are the industry's mainstay treatment for acne, with adapalene being one of the most commonly prescribed. Retinoids are often used in combination therapy with benzoyl peroxide.

The graph below shows how the Clarifying range compares to these treatments.

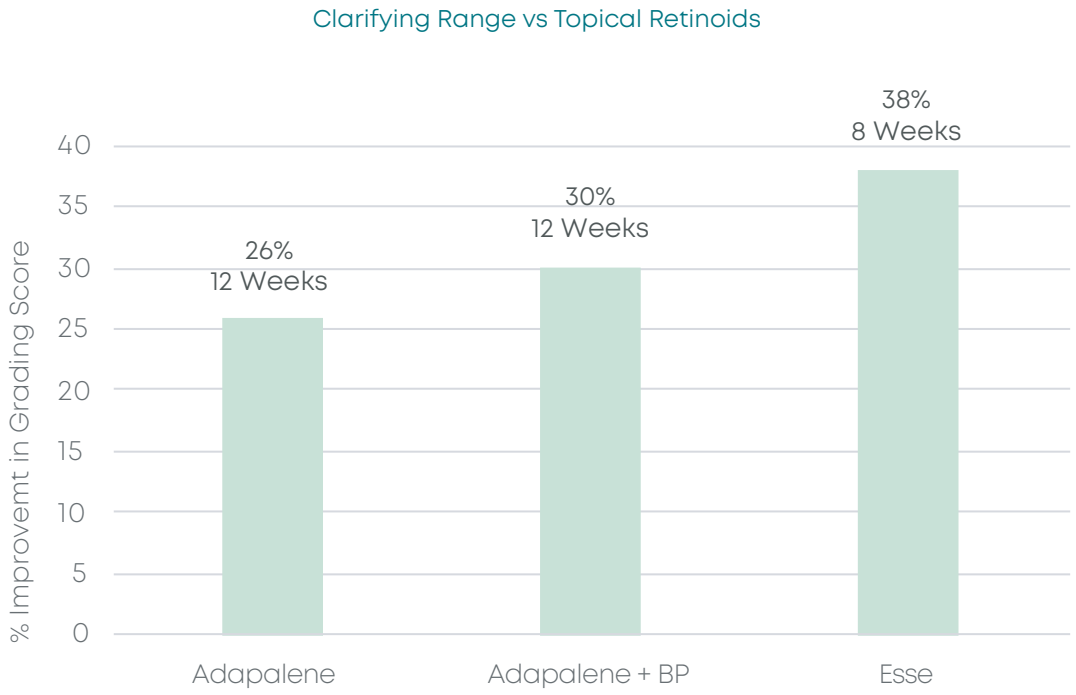

Figure 4 - Efficacy of the Clarifying range versus topical retinoid treatment options

If we consider the above graph, we can see that the improvement from the Clarifying range is almost 1.5× greater than the improvement from adapalene treatment. To be precise, it's **1.46x** greater. The Clarifying range is therefore 46% more effective than adapalene at improving acne grading scores. An additional benefit is that our products managed to deliver these results in less time than the other treatment options - 8 weeks rather than 12.

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Adverse reactions versus Topical Retinoid treatment

30X less likely to result in adverse reactions than retinoid (tretinoin) treatment

The Esse Clarifying range achieved these results with a much lower frequency of adverse reactions than that associated with retinoid use, as can be seen by the graph below.

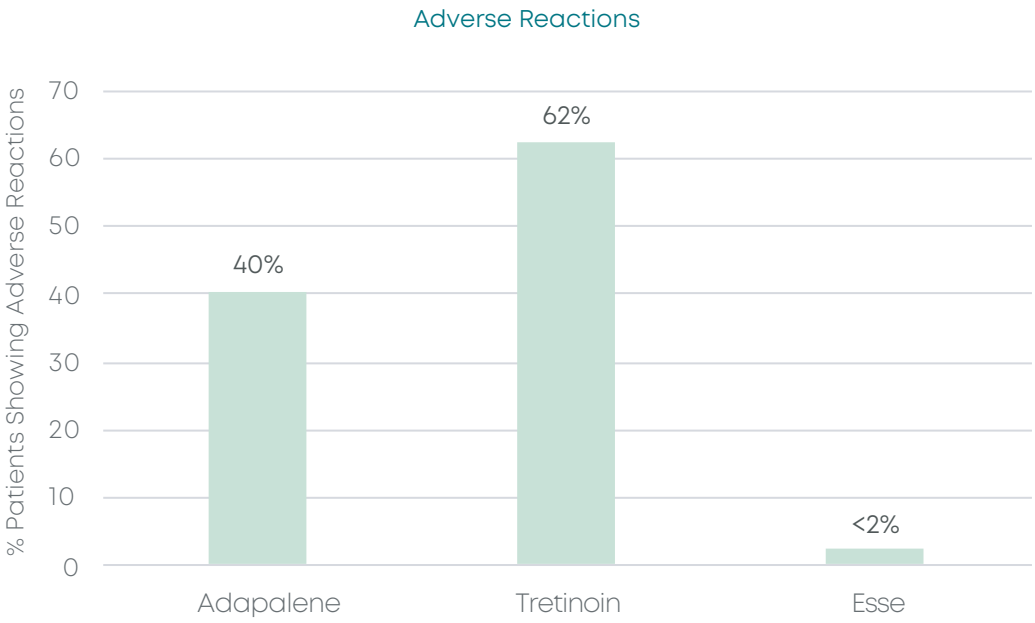

Figure 5 - The adverse reaction rates associated with different treatment options.

The Clarifying range has been tested for adverse reactions on a larger subject group, and has exhibited a rate of adverse reactions of less than 2%.

If we consider the above graph, we can see that Tretinoin's rate of adverse reactions is 31 times higher than that of Esse's Clarifying range.

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Effectiveness versus Topical Retinoid treatment & Antibiotic treatment

90% as effective as retinoid + antibiotic combination therapy, without microbiome destruction

The Clarifying Range provided results that are comparable to those seen for a combination treatment of topical retinoids and an oral antibiotic.

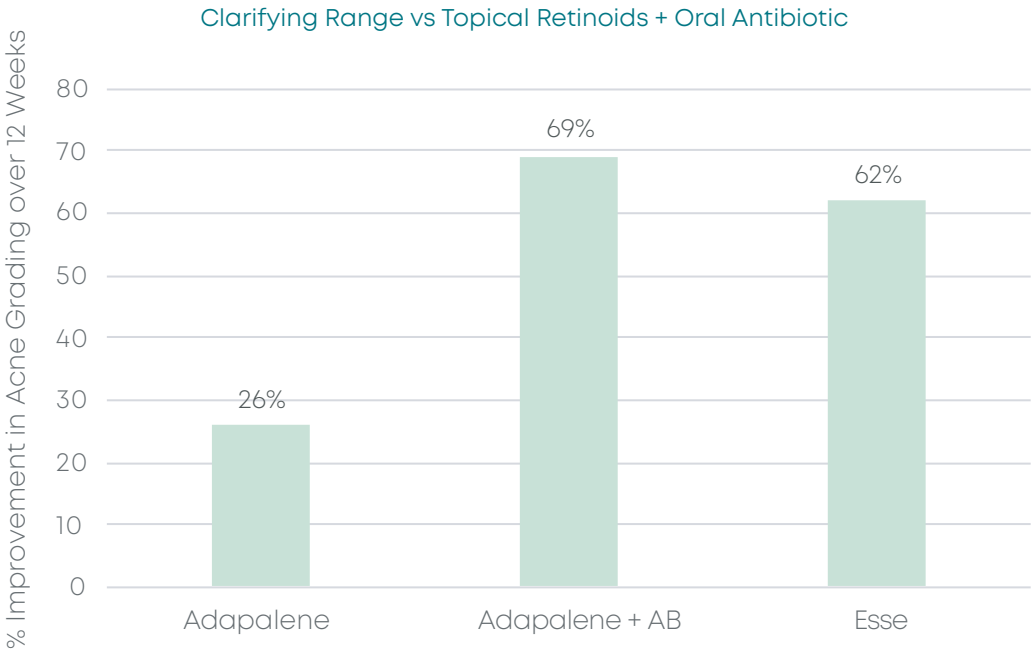

Figure 6 - Effect of the Clarifying range versus topical retinoids and oral antibiotics over a 12 week period

If we consider the above graph, we can see that the Clarifying range is **90% as effective** at improving acne grading as retinoid and oral antibiotic combination therapy.

We are happy with this result, as our products do not cause the destruction of microbial populations throughout the body, so we can get comparable acne improvements to those seen when using retinoids with oral antibiotics, but without suffering the consequences of antibiotic use.

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Acne Grading Scores

38% reduction in acne grading over 8 weeks

Three study staff separately graded the acne severity of each subject over the course of the study. The grading system used was the Leeds Revised acne grading system.

The Leeds Revised acne grading system uses reference photographs for evaluators to compare to, along with some grading criteria that allow researchers to establish acne severity in their subject group. Criteria considered when grading acne severity include the extent of inflammation, range and size of inflamed lesions and associated erythema.

The choice of this grading system was based on a few factors, including its prioritisation of inflammatory states (inflammation is most visually impactful).

The graph below demonstrates the effect that the Clarifying range had on the average acne grading over the 60-day period.

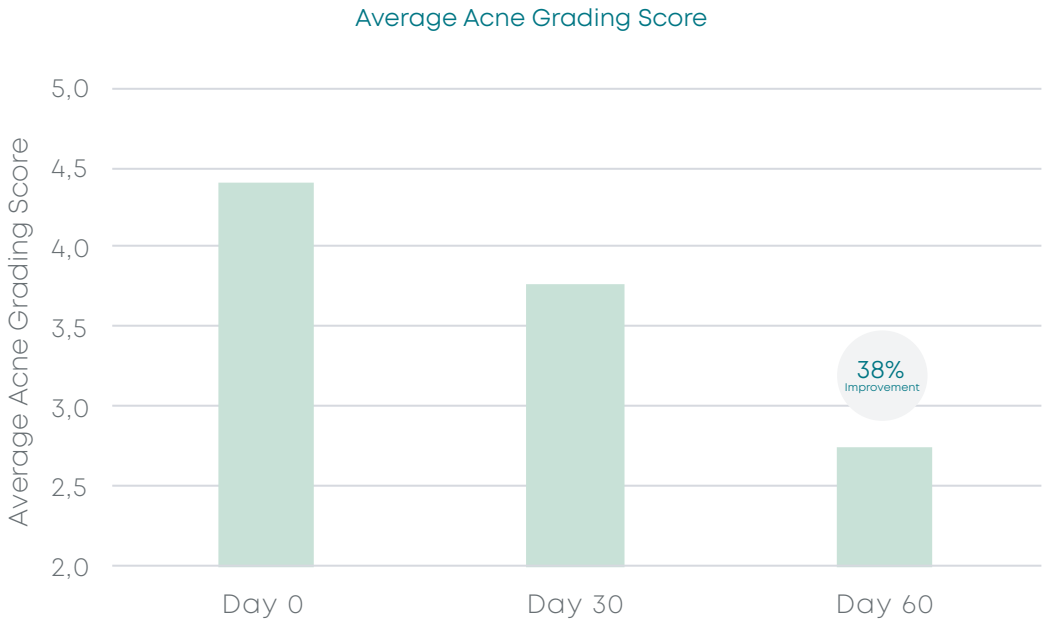

Figure 7 - Average acne grading scores (14 volunteers), as evaluated by three separate study staff using Leeds Revised acne grading system.

Note: Results were determined from photographs submitted by the volunteers of their faces from various angles, at similar times of day, under the same lighting, as far as possible. Acne severity was graded using Leeds Revised acne grading system. In-person evaluation was decided against, as a measure against Covid-19.

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Self-grading by our volunteers

Esse places value on how our clients feel about their skin. We asked our volunteers to grade their own acne severity and their perceived skin condition during our study.

Self-graded Acne Severity

We asked our volunteers to rate their own acne severity on a scale of 1 to 10, in which 1 indicated least severe acne, and 10 indicated most severe. The graph below demonstrates what happened to our volunteers' average self-evaluated scores:

Figure 8 - Average self-evaluated acne severity scores.
1 = least severe, 10 = most severe.

Self-evaluated Skin Condition

We also asked our volunteers to evaluate their general skin condition on a scale of 1 to 10 during the study. Here, 1 indicated the poorest skin condition and 10 indicated the best skin condition.

The graph below demonstrates what happened to the volunteers' own rating of their skin condition over the course of the study.

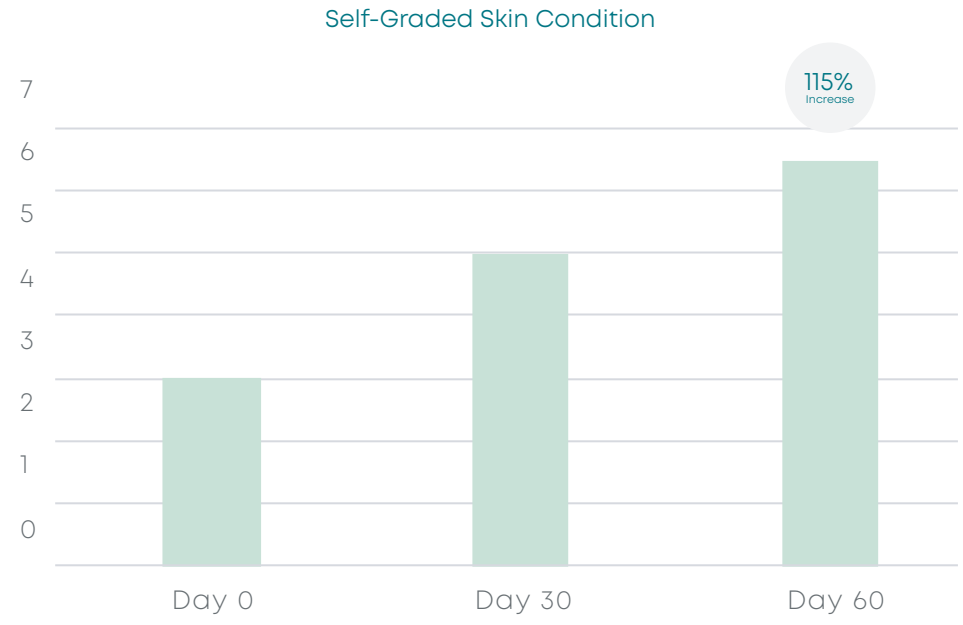

Figure 9 - Average rating of skin condition by the volunteers.
1 = poorest skin condition, 10 = best skin condition

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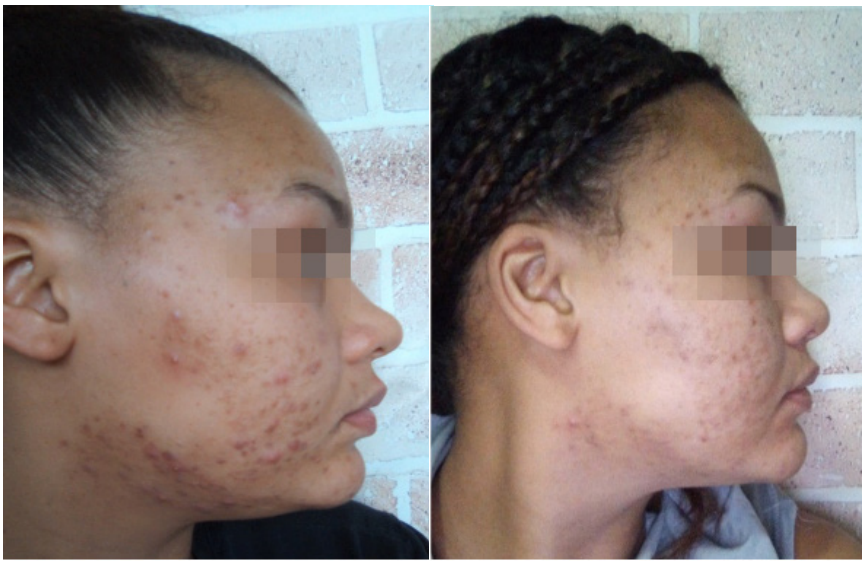
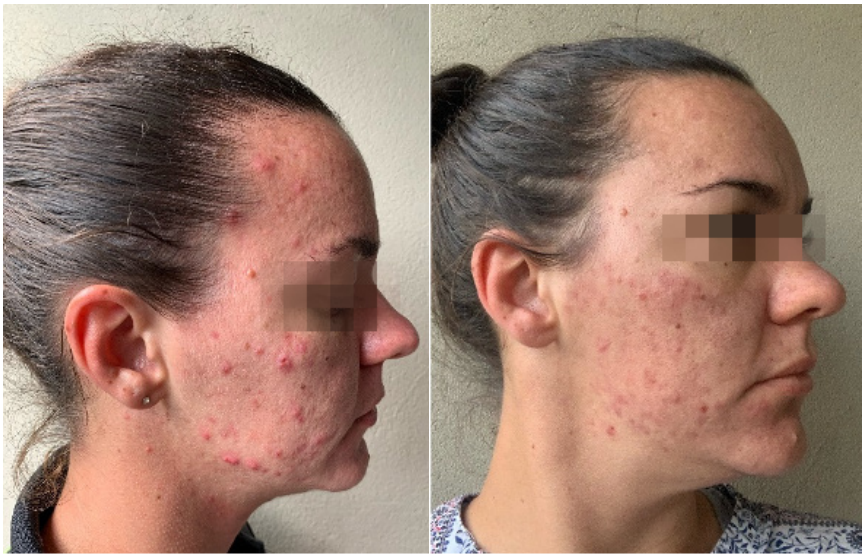
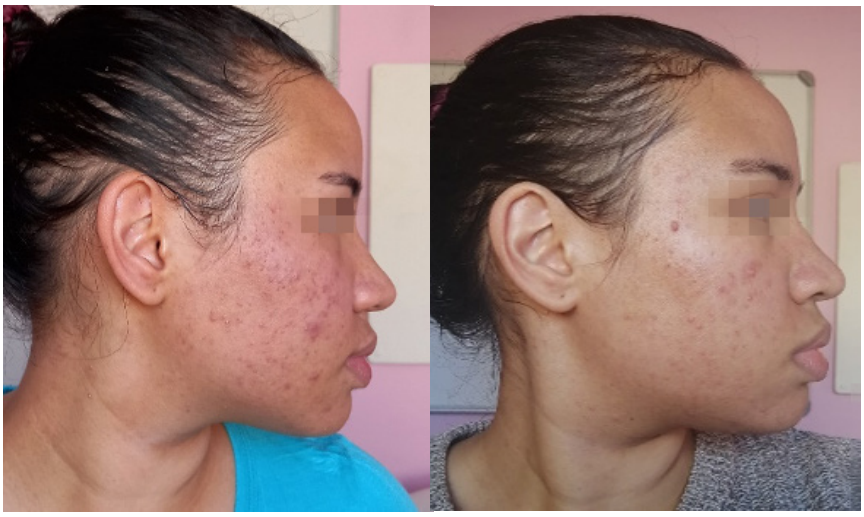
Before and After Examples From our Trial



Right Side View of Facial Area of ESAC002 at Day 0 and Day 60 (left to right)



Right Side View of Facial Area of ESAC006 at Day 0 and Day 60 (left to right)



Right Side View of Facial Area of ESAC009 at Day 0 and Day 60 (left to right)

References
1. S. C. O'Brien, J. B. Lewis and W. J. Cunliffe, J. Dermatolog. Treat., 1998, 9, 215–220. doi:10.3109/09546639809160698.

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