Title: **Development of a range of products for acne treatment on sensitive skin and preliminary design of its manufacturing process.**

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In this day and age, consumer needs are increasingly individualised, diverse and changing. Due to this fact, product development aims to satisfy these needs by transforming them into a commercial product available on the market.

Specifically, skin care products are of great relevance in today's society and therefore can be said to have had a major impact on the cosmetics industry. They are considered to be part of the daily routine of a large part of the population as, in addition to helping to achieve healthier skin, they also improve self-esteem. In relation to this fact, one of the most frequent dermatological conditions which can have a negative impact on self-esteem, is acne.

It is worth mentioning that as a result of the pandemic caused by the COVID-19 virus and the continued use of face masks, an increase and/or worsening of acne has been observed. As a result, there is an increased need for products for the treatment of this skin disease in today's society. On the other hand, its treatment can be complex specially in people with sensitive skin prone to inflammation and redness. Therefore, the present work is based on the development of a range of formulated products for the treatment of acne on sensitive skin. In particular, a facial cleansing gel and a night cream to help control the appearance of pimples and reduce scarring caused by acne. The formulation of both cosmetics consists of O/W emulsions, although the cleansing gel is a microemulsion and the night cream is a macroemulsion. In addition, it should be noted that the active acne treatment ingredients used in the formulations are: salicylic acid, tea tree oil and niacinamide.

The development process includes the following stages: product conceptualisation, quality criteria, formulation and preliminary design of the manufacturing process for an annual production of 40,000 kg/year for the cleansing gel and 10,000 kg/year for the cream.

Keywords: Formulated product development, acne, sensitive skin, facial cleanser, night cream, process synthesis, quality criteria, manufacturing process design.