

# CLEAR GEL WITH ENCAPSULATED VITAMIN E & A

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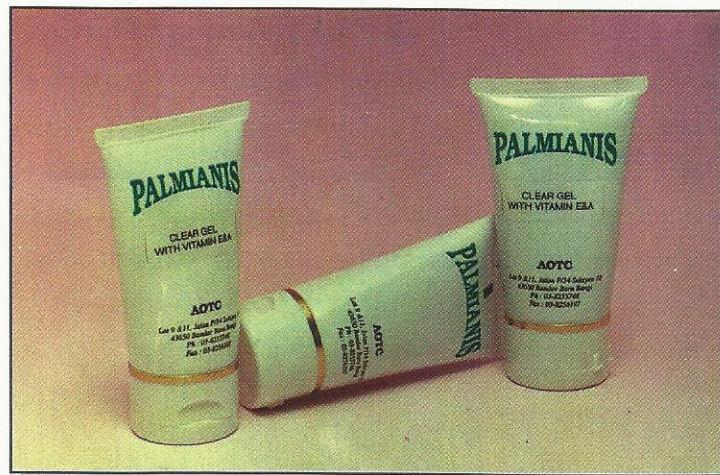
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The use of cosmetic products is as old as civilization. During ancient times, people had already begun to use a variety of items to enhance their appearance. The Renaissance era saw a wider acceptance of cosmetic products. This was the period of rose water, homemade soap, cucumber cream and rice powder. With development and improvement in every aspect of our lives, cosmetic product saw tremendous growth in terms of quality improvement and product variation. The development of synthetic materials, advances in chemistry, improvement in method of preservation and invention of aerosols have contributed to the mark increase in cosmetic product variety. Currently, there are many cosmetic product available in the market offering various kinds of functionality and delivery innovations such as nanotopes, liposomes, and encapsulation. In AOTC, we have been able to formulate products which combine the use of palm based materials and encapsulated technology to create a product that has functionality as well as aesthetic value.



## PALM BASED RAW MATERIAL

The use of palm based materials in cosmetic products used to be very modest because of a few drawbacks such as poor colour, odour and stability. However with the improvement in oleochemicals processing, there have been significant improvements in the quality as well as the stability of the raw materials produced. Currently, the oleochemical industry can supply virtually odourless and colourless products of the highest purity to the cosmetic industry. Basic oleochemicals derived through chemical as well as biological methods has provided the cosmetic formulators with valuable as well as exotic

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ingredients which serve different purposes such as emulsifiers, emollients, humectants, surfactants, thickeners and many others.

## VITAMIN E

The term vitamin E is a generic description for all tocopherol and tocotrienol derivatives qualitatively exhibiting the biological activity of  $\alpha$ -tocopherol (Mason, 1980). Initially, vitamin E was not widely used in cosmetic preparation because of the belief that it could not penetrate the skin and at the same time little was known about the metabolic activity of the skin. With better understanding of the physiology of the skin, hair and nail, interest in the use of topically applied vitamin E is increasing. There have been numerous studies which have indicated that the incorporation of vitamin E enhances the performance of cosmetic products. Broad cosmetic actions of vitamin E include antioxidant effect, ultraviolet protection and free radical scavenger effect which contribute to the anti- ageing property.

## VITAMIN A

Vitamin A, also known as beta-carotene or retinol, is very important to the human body as it is involved in the normal functioning of our eye sight, growth, tissue healing, formation of healthy skin and protection of the skin from the harmful effects of free radicals (Health World Online, 1998). Because of its beneficial effects on the skin, vitamin A is often used to treat a variety of skin problems such as rashes, boils, skin ulcers and acne. Along with adequate protein intake, it can also generate healthy hair by preventing loss of scalp skin moisture. Recently, a new derivative of vitamin A, known as Retin-A, was introduced to the market and claimed to be able to reduce wrinkles and acne by restoring skin tissue if applied topically (Health World Online, 1998).

## ENCAPSULATION TECHNOLOGY

Encapsulation is a technique used to coat an active component with a thin layer of coating or encapsulating agent (*i.e.* polymer) around the core materials in such a way it protects the core against deterioration and releases it under desired conditions. The encapsulation technology which has been applied in the cosmetic industry has allowed cosmetic formulators to develop functional formulations using raw materials which are difficult to handle before such as plant extracts and minor components. Some plant extracts and minor component might have stability or colour problems if introduced directly to the formulation to interaction with the other raw materials. Encapsulation owing technology also helps to ensure that the active component is safely preserved in the individual capsule prior to use, therefore eliminating the possibility of deactivation of the active ingredients in the formulation, which may result in non-functional products.

## CLEAR GEL WITH VITAMIN E & A

This formulation is basically a water-based gel produced with a dispersion method. The raw materials added to the formulation were selected in such a way that they would not turn the end-product cloudy. The pH of the formula as well as the mixing speed has to be critically monitored to avoid deactivation or breaking of the encapsulated component. This formula is intended for facial or around the eye area application, hence, the simple yet elegant formulation.

## CONCLUSION

Elegant yet functional products can be successfully created with the right combination of raw materials and technology.

## REFERENCES

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