

MOISTURISERS
EMULSIONS
GELS
CLEANSERS
SOAP
SURFACTANT TYPE
EMULSION TYPE
FOUNDATIONS
EMULSIONS
'CREAM TO POWDER'
PAN OR STICK PRODUCTS
PRESSED POWDERS
EYE PRODUCTS
PENCILS
MASCARRA
EYE SHADOWS
EYE LINERS
ANTI AGEING PRODUCTS
EMULSION
GELS AND SERUMS
LIP PRODUCTS
LIPSTICK
LIP BALMS

Why do we need moisturisers?

There are several causes of dry skin.

1. Bad cohesion between corneocytes
2. Poor water fixation by corneocytes
3. Breaches in the hydrolipidic barrier

Explanations.

1. Hydration
2. How the skin retains water

How a moisturiser works:

a moisturiser works in a number of ways, depending on the ingredients used in the formulation. In its most basic form a moisturiser will contain water, and at least one humectant and one emollient and an emulsifier.

Passive strategies: preventing water from evaporating.

- applying a hydrophilic or lipophilic film
- introduce a specific molecule

Active strategies: reinforcing the skin's ability to retain water.

- reinforce the water retention capacity.
- stimulating synthesis of certain molecules within the dermis.

Ingredients In Moisturisers

Emulsifiers

Emulsion stabilisers

Humectants and emollients

Additives

Preservatives

General Approach To Emulsion Formulation

1. Understand the microstructure of the emulsion.
2. Understand the mechanisms involved in the emulsification process and in forming the microstructure.
3. Understand the influence of excipient interactions and variability on the microstructure.
4. Understand the relationship between microstructure and rheology of the system (and specific individual components) at all stages of processing, storage and use.

Emulsions are thermodynamically unstable.

Cosmetic emulsions range in consistency from mobile milks and lotions to semi-solid ointments and creams.

Some Factors Affecting Structure And Stability

- Batch variation of individual components.
- Variation in manufacturing technique.
- Choice of emulsifier.
- Choice of structuring ingredients.

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EMULSIFIERS

HLB System (Griffin – 1949)

Water Solubilisation Method

In practice:

- Heat the entire oil phase to 75C. (Place into a beaker on a hot plate/magnetic stirrer).
- Slowly add water (Note: RT water only, not the water phase)
- At some point the oil phase (and added water) remains turbid and eventually becomes quite opaque.
- The point (amount of water added) at which the oil phase became cloudy is recorded.
- Repeat the test varying one component of the oil phase.

STOKES LAW:

$$V = \frac{d^2 r_p g}{18 n}$$

V = the velocity of sedimentation

d = diameter of the particles of the dispersed phase

r_p = difference of specific gravities of the internal
and external phase

g = acceleration due to gravity, constant

n = viscosity of the external phase

Lamellar gels.

Formed by amphiphilic materials that do not form micelles.

- low water solubility;
- small polar head groups;
- large hydrophobic groups;
- a low charge density when combined together.

Eg: Glyceryl Stearate; Palmitic Acid; Stearic Acid; Lecithin; Cetyl Alcohol; Lauryl Alcohol.

Selecting Emollient Esters.

Emollience is a phenomenon best described by its effect – the sensation that is perceived on the skin after an oily substance is applied to its surface. This effect is based primarily on the capacity of the material to leave a thin lipid film of limited water permeability on the skin.