

COSMETICS

15th week

COSMETICS

Cosmetic product means any substance or mixture intended to be placed in contact with the external parts of the human body (epidermis, hair, nails, lips and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition or correcting body odors (EU Regulation 1223/2009, Article 2.1.a)

In Turkey;

✓ **Turkish Medicines and Medical Devices Agency**
Department of Cosmetic Products

✓ **The procedures are carried out in line with the requirements declared in the Cosmetic Regulation.**

International Cosmetic Regulations

- * FDA Regulations

- * European Union Regulations

COLIPA- The European Cosmetic and Perfumery Association

- * Japanese Regulations

«Cosmetic» is derived from the word of « Kosmein » in Greek.

Cosmetics can be classified as;

- Cosmetic preparations for skin
- Cosmetic preparations for hair
- Cosmetic preparations for nails
- Cosmetic preparations for buccal mucosa and teeth

1- Cosmetic preparations for skin

- Moisturising creams, emulsions, lotions, gels and oils
- Cleansing creams, emulsions, lotions, gels and oils
- Bath and shower preparations (salts, foams, oils, gels, soaps)
- After-bath powders
- Tinted bases (liquids, pastes, powders)
- Face masks

1- Cosmetic preparations for skin

- Hygienic powders
- Toilet soaps
- Deodorant soaps
- Perfumes, toilet waters and eau de colognes
- Deodorants and antiperspirants
- Depilatories

1- Cosmetic preparations for skin

- Make up preparations

Eye make up preparations (eyeshadow, eyeliner, mascara)

Lip make up preparations (Lipliner, lipstick, lipgloss)

Foundation creams

Face powders

Blushers

- Products removing make-up

1- Cosmetic preparations for skin

- Shaving products (creams, foams, lotions)
- Products for tanning without sun

2- Cosmetic preparations for hair

- Hair colorants
- Products for waving, straightening and fixing hair
- Hair-setting products
- Hair-cleansing products (lotions, powders, shampoos)
- Hair-conditioning products (lotions, creams, oils)

3- Cosmetic preparations for nails

- Nail polishes
- Nail polish removers
- Products for nail care

4- Cosmetic preparations for buccal mucosa and teeth

- **Toothpastes**
- **Mouthwashes**

Nowadays, main expectations from cosmetic products are;

- Skin protection against natural or photo-aging
- Prevention of the signs of aging

Classical cosmetics are not enough to meet these expectations.

COSMECEUTICALS are used in anti-aging products.

- ✓ Federal Food, Drug and Cosmetic Act (FD&C Act) does not identify the term of « cosmeceutical ».
- ✓ However, this term is used to indicate the cosmetic products that have medicinal or drug-like benefits.

Cosmeceuticals / Dermacosmetics

- ✓ Are substances or products which provide the desired cosmetic impression by means of physiological effect.
- ✓ Have positive effects on the structure and function of skin and also skin appendages.

Cosmeceuticals

Natural Moisturising Factor

Hydroxy acids

Ceramides

Peptides

Proteins

Vitamins

Growth Factors

Cosmeceuticals

Depigmentation agents

Sunscreens (Sun filters)

Antioxidants

Botulinum toxin

Herbal compounds

Biofactors

Biotechnological products

Plant growth hormone

NATURAL MOISTURISING FACTOR (NMF)

- Natural moisturizing factor (NMF) is a combination of various compounds found in the skin.
- They maintains the moisture at outer layers of the stratum corneum.

NMF is consist of;

Urea

Lactic acid

Glycolic acid

Phospholipids

Malic acid

Pyruvic acid

Pyrrolidone carboxylic acid sodium salt

HYDROXY ACIDS

α - Hydroxy acids

β - Hydroxy acids

Polyhydroxy acids

α -Hydroxy acids (AHA)

Glycolic acid

Malic acid

Tartaric acid

Lactic acid

Sitric acid

Pyruvic acid

- AHAs provide the exfoliation of the stratum corneum by the chelating of calcium ion which is involved in intercellular cohesion (Chemical peeling)
- AHAs are promoting the cell differentiation which results in a young-looking skin.

DEPIGMENTATION AGENTS

- They are used in hyperpigmentation.
- Hyperpigmentation is the formation of dark stains on skin as a result of the excessive increase of melanin pigment production.

Depigmentation agents;

Hydroquinone

Arbutine

Kojic acid

Azelaic acid

Aloesin

Glabridin

Ellagic acid

CERAMIDES

- Ceramides are the dominant lipids that make up about 50% of the intercellular lipid content in the stratum corneum.
- They provide the barrier function of skin.
- They increase the skin hydration by preventing TEWL (transepidermal water loss).

PEPTIDES

- Signal peptides
- Neurotransmitter inhibiting peptides
- Carrier peptides
- Enzyme inhibiting peptides

Signal peptides

- These peptides increase collagen production of fibroblasts and decrease the activity of collagenase enzyme.

Carrier peptides

- These peptides transport trace elements such as copper and manganese which are essential for wound healing and several enzymatic processes.

Neurotransmitter inhibiting peptides

- These peptides were developed to imitate the Botulinum neurotoxin.
- They inhibit the acetylcholine release at neuromuscular junction.

Enzyme inhibiting peptides

- These peptides directly or indirectly inhibit an enzyme.

VITAMINS

- Vitamins are compounds with many essential functions in the human organism.
- Some vitamins are synthesized in the body while some are taken with diet.
- Vitamins A, B, C and E are the most important vitamins in terms of cosmetics.
- D and K vitamins and folic acid may also present in formulations.

SUNSCREENS

Sunscreens protect the skin and provide a quick and smooth tanning by controlling the amount of UV rays reaching to the skin.

Chemical (Organic) Sunscreens

They absorb UV rays and prevent their penetration into skin.

Physical (Inorganic) sunscreens

Their mechanism of action is based on reflecting and scattering the UV rays.

Physical (Inorganic) sunscreens

Titanium dioxide

Zinc oxide

Iron oxide

Kaolin

Talc

Chemical (Organic) Sunscreens

PABA derivatives	(UVB)
Methoxycinnamates	(UVB)
Salicylate esters	(UVB)
Benzophenones	(UVA)
Dibenzoylmethanes	(UVA)

SELF TANNING PRODUCTS

- They dye skin as a result of a chemical reaction.
- They have no sun protection effects. They are accepted as make up product.
- UV filters can be added into these products.
- Dihydroxyacetone (DHA)