



## REQUIREMENTS FOR COSMETIC PRODUCTS

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**Abstract:** *Today, new chemical compounds are used to create and expand the range of effective cosmetic preparations. For example, emulsifiers, pastes, dyes and fragrances obtained through new organic synthesis, new types of raw materials (resins, veiling agents, waxes, etc.), SFM.*

**Key words:** *acne, darkening, spot formation, seborrhea, sweating.*

The main direction of modern cosmetology is the use of BFM in cosmetics, that is, vitamins, biogenic stimulants, plant extracts, hormones, bactericidal preparations, enzymes, protein hydrolysates and their complexes. This direction is very promising in the prevention and treatment of diseases, especially in the elimination of cosmetic defects. If cosmetics are used for a long time and continuously, the chemicals are absorbed through the epidermis, through the secretion of hair follicles and sebaceous glands. will be a secret. Therefore, for industrial production and use in medicine, it is allowed to use only such cosmetic products, when they have passed experiments and clinical studies, and their safety and effectiveness have been proven, as well as CIS have been developed and approved. If The components used in cosmetics must meet and meet the requirements of TST (OST) and DF.

Stele When new cosmetics and new components are tested, the drug's harmlessness (acute and chronic toxicity), reddening, inflammation, allergy and non-specific effects are studied. In addition, there must be information about the carcinogenic and teratogenic effects of the drug.

If there are new chemical compounds in the recipe of cosmetic products, they should be toxicologically assessed by generally accepted methods, their toxicity, type and main parameters should be given. Among them, the toxicology of the entire recipe should be studied.

In addition to the overall evaluation of cosmetic products when tested, they are also smooth

when applied to the skin (for example, creams and lotions): substance permeability of the skin barrier using the isotope method or other methods;

skin in histological, histochemical, historadiographic and electron microscopic methods

impact on the structure;

biochemistry indicators;

It is necessary to study the reaction of the skin to pH and temperature.

The Pharmacology Center reviews the guidelines for the general public use of the cosmetic product based on the submitted documents. Cosmetic products are produced on the basis of technological regulations and must necessarily comply with the provisions of



DST 29189-91 (requirements for technology and recipe approved by the UzR SSV) SaNPIN 0152-04.

Cosmetic ointments are a type of soft medicine, a highly viscous mass that is well applied to the surface and forms a non-flowing film on the skin. According to the dispersological classification of drugs, they belong to all free formless dispersed systems. The difference from liquid drugs is that smears do not flow. Cosmetic ointments have been used since ancient times. It is mainly used as a covering and protector of the skin, as well as a healing agent (for skin wounds, burns, frostbite and cracks).

In addition, it is used for hair loss or hair growth, etc.

Classification of cosmetic ointments

I. When using for skin:

1. Soften the skin
2. Stain removal
3. Freckle removal
4. Skin protection
5. Nourish the skin
6. Skin treatment

II. When using for hair and scalp:

- . Hair and scalp treatment
- . Hair loss
- . Hair growth
- . Applying various insecticides to the scalp

Most often, cosmetic ointments are used for the following purposes:

- . Transfer skin
- . Soothe the skin
- . For epithelization
- . Softening
- . Absorption of substances into the skin

The mechanism of action of cosmetic ointments is as follows:

Different cosmetic creams definitely have a base, often oily bases are used.

After the cosmetic ointment is applied to the skin, the property of that skin to emit heat decreases, the skin warms up and hyperemia appears (the skin becomes red). Water does not fly from under the ointment, the upper layer of the epidermis swells (maceration) and helps the absorption of various medicinal substances in the ointment into the skin.

Ointments are a type of soft drug with a viscous consistency intended for use on the surface. Cosmetic ointments or Creams. it has a soft consistency intended for the care of the skin of the face, hands, feet and scalp, and consists of one or more medicinal substances and auxiliary substances - bases.

Today, ointments (creams) produced in the cosmetics industry can be classified into the following groups:

1. Oily (non-emulsion) creams. These cosmetic creams. depends on the oil and fatty substances (vaseline, perfume oils, etc.) or their mixture.



2. Emulsion creams. The consistency of these cosmetic ointments depends on the amount of oil and water in the composition.

3. Oil-free creams or gels are thinly dispersed suspensions (suspensions) of colloids (hydrosol, jelly), fatty acids or waxes in water, which contain very little or no fat.

According to their application, cosmetic ointments (creams) are classified as hygienic (prophylactic: protecting against wind, humidity, sunlight or nourishing and activating skin activity) and healing (special: suitable for treating blemishes, darkening, spot formation, seborrhea, sweating) can be classified into

According to the XI-DF instructions, medicinal substances are included in the composition of ointments based on their physical and chemical state.

Medicines that dissolve in a base should be inhaled on the basis of ointment. Examples of drugs that dissolve in an oil base include anesthesin, benzoic acid, betanaphthol, camphor, menthol, thymol, phenol, phenylsalicylate (salol), folliculin, chloral hydrate. Also, drugs that dissolve well in water (potassium iodide, resorcin, sulfacyl sodium (albutcid), novocaine hydrochloride, ephedrine hydrochloride) are added dissolved in water to PEG MS Na- KMS and other hydrophilic bases, which can also be included in homogeneous type ointments.

substances are included in the composition of the ointment in the last place. is a solution or alloy (at the level of molecular or micelle fineness), that is, in the smears, the drug and the base are not divided into separate phases. However, homogeneous spreads are not always single-phase, in most cases, the bases themselves are structured, that is, it consists of at least two phases, for example, petroleum jelly and anhydrous lanolin. They consist of micro or ultramicro particles and provide the viscosity of the ointment. Goniogenic smears on

- 1) alloy
- 2) solution
- 3) extraction can be classified

Compound-type lubricants consist of several mutually soluble components, which are formed by combining oil, wax, hydrocarbon, tar, high molecular fatty acids with each other. Some of them can be hard, some soft, and some liquid. When preparing ointments belonging to this group, it is recommended to first dissolve difficult, then medium and finally easily soluble substances. It is not allowed to overheat easily soluble substances. In solution-type ointments, the drug is dissolved in the base. In their preparation, the base is first dissolved, then the medicinal substance is added and mixed until dissolved.

Also, extraction ointments, in which the active substance is extracted from plant or animal raw materials with the help of an ointment base, are also classified as homogeneous ointments. When forming a homogeneous type of mixture, many medicinal substances form eutectic mixture, that is, their melting temperature is observed to decrease somewhat. In order to increase the viscosity of such cosmetic ointments, structuring substances (lanolin, wax, ceresin, paraffin) are added to their composition. Heterogeneous cosmetic ointments are classified into suspension (trituration or suspension type), emulsion and mixed type.

If the medicinal substance is not soluble in an oily (oily) base or water, as well as water-soluble substances are given in large quantities or dissolution by effect



if it is forbidden, they should be crushed and added to the base in the form of powder. Although it dissolves well in water, the following can be cited as examples of medicinal substances that can be added to the base in the form of a suspension:

a) resorcinol, zinc sulfate, penicillin (despite the fact that resorcinol and penicillin are well soluble in water, they are crushed and added to the ointment in the form of a suspension using a small amount of mineral oil, otherwise the aqueous solutions of these substances have a toxic effect on the skin (tickling, causing tissue necrosis) Eye ointments are an exception;

b) substances that are difficult to dissolve in water, included in the composition of the ointment in the form of a suspension: boric acid, sodium tetraborate (bora), levomycetin, methyluracil, furatsilin, ethacridine lactate, etc.

c) substances insoluble in water and base: bismuth subnitrate, dermatol, calcium carbonate, salicylic acid, starch. xeroform, purified sulphur. sulfanilamide preparations (streptocide, norsulfazol, etc.), talc, zinc oxide are introduced in the form of a suspension.

If the amount of solid medicinal substance included in the suspension (trituration) ointment is less than 5% compared to the mass of the ointment, before adding the medicinal substance to the base, it is crushed with half its amount with an auxiliary liquid suitable for the ointment base. For example, if the lubricant base is hydrocarbon in nature, vaseline oil as an auxiliary liquid for grinding, vegetable oils (sunflower, peach, almond) for oily bases; for hydrophilic bases - purified water, glycerin are used.

If the amount of solid drug included in the suspension ointment is 5% or more compared to the mass of the ointment, before adding it to the ointment, it is ground with a diluted ointment base in a hot air (50-600 C) (half the amount of solid medication). In this case, it is not advisable to add a liquid excipient for grinding, because the dilution of the ointment and the decrease in the concentration of the drug substance may cause the drug substance to not meet the criteria for deviation from the quantity.

Lubricants containing 25% or more of solid phase drugs are called pastes. They have a thick (pasty) consistency, and in order to ensure a high dispersion of the drugs included in them, they are thoroughly ground in a heated mortar with a diluted base (half the amount of the solid phase), then the rest of the diluted base is added and grind until the paste cools.

Emulsion cosmetic creams are characterized by the presence of a liquid component and the fact that it is distributed on the basis of the type of emulsion. Emulsion formation and properties of these systems obey the general laws of emulsions. Emulsifiers are included in the composition to create stable emulsion systems. Emulsifiers distribute between two phases (oil/ water or water/ oil) and reduce the reserve of surface free energy. The type of emulsion formed is mainly determined by the properties of the emulsifier. The paste contains more than 25% talcum powder

Ointment. The consistency of the paste is close to the dough

Ointments are used

Emulsion cosmetic creams mainly use emulsifiers of oleophilic nature, which emulsify aqueous solutions in an oily or oily medium. One of the most widely used emulsifiers in emulsion cosmetic creams are sterols, cholesterol, isocholesterol and other high molecular alcohols (cetyl, stearyl) and raw materials with a complex composition that preserve them



(lanolin, wax), soaps that purify alkali metal salts, oshin ointment (lead soap). Compared to these, less metal resinsates (salts of wax acids), unsaturated complex esters of fatty acids formed with glycerol or polyglycerols (T-1 and T-2) are used. In foreign countries, anilides of palmitic and stearic acids ( $R-CO-NH_2$ ), acid cetyl, stearyl, lauryl ( $C_{12}H_{25}OH$ ) sulfoethers formed with alkaline salts; diglycol-oleate, sorbitol-monolaurate, polyoxyl-stearate  $H(OCH_2CH_2)_n.OCOC_{17}H_{35}$ , lennet waxes (mixtures of saturated high molecular weight alcohols obtained by hydrogenation of fatty acid mixtures). In some cases, leucine is also used as an emulsifier.

Hydrophilic emulsifiers such as agar-agar, tragacanth, gelatin, casein, gummyarabic are mainly used in the production of cosmetic M/S type emulsion smears. Cosmetic smears obtained with the help of the mentioned emulsifiers are practically not stable: they quickly separate into a layer, they are quickly affected by microbes, and they quickly dry out due to the loss of water. Hydrophilized bases with a complex composition are used in the preparation of cosmetic creams.

Cream (fr. cream - dessert made on the basis of cream) is a soft, smooth consistency applied for cosmetic purposes. In most cases, cosmetic creams are made on the basis of emulsion, as well as lanolin, spermaceti, beeswax, glycerin, almond, coconut and other plant and various aromatic essential oils are used in their preparation. Creams are soft, they are a widely used cosmetic tool for skin care of hands, head and face. Emulsion cosmetic creams are quickly resorbed when applied to the skin and show rapid activity. Due to their water content, emulsified creams reduce the dispersion of fatty and greasy substances. Emulsified creams are white in color, have an elastic and soft soft consistency, their consistency does not depend on the effect of temperature, unlike water-free creams, and they are easily applied to the skin and have a good aesthetic appearance. When applied to the skin (mainly m/s type creams), they have freezing properties.

Cosmetic creams begin their history with K. Galen (165 BC). It is the first cream with cooling properties *Ceratum lenientes s. Refrigerans* (today's cold creams are cold cream) offered the composition and technology. Modern cold creams are m/ s or s/ m type emulsions, they do not contain emulsifiers, the consistency is determined by the wax content.

Today, wax, spermaceti, oils, petroleum jelly, cetyl alcohol, liquid paraffin, and flea are added to cold creams. Cold- creams form rough dispersion systems or quasi- emulsion systems, different from emulsions, they are not stable, when applied to the skin, the water contained in them is released, and as a result of this water evaporation, it cools the skin and the environment. If the base of the ointment is not cooled, and the water added to it is hot, the emulsion cream will lose its cooling properties.

Koldkrem (cold cream) is mainly a cosmetic ointment with freezing properties. The water in the cream evaporates and has a soothing, cooling effect on the skin

In order to ensure the therapeutic activity of grains included in emulsion cosmetic ointments, oil- soluble substances are dissolved in oil, and water- soluble substances are dissolved in water. , tannin, silver nitrate, etc. substances are dissolved in water and then added to the base. Therefore, substances such as resorcinol, zinc sulfate, and penicillin are added to ointments in the form of suspensions due to their instability and toxic effects. Dry





and dark extracts are added after grinding in alcohol- glycerin- water mixture (1.3.6) before being added to the base. Oil- soluble medicinal substances are dissolved on the basis of the ointment and included in emulsion cosmetic ointments (see homogenous ointments).

Quality control of cosmetics. Cosmetic products are different in terms of use, appearance, consistency and structure, and their preparation is also unique. Cosmetic products usually contain 10 or more different ingredients for different purposes. In this case, it is required that the substances included in the composition of cosmetics are compatible with each other, the correct selection of the amount, and the stability of the finished product at different temperatures and for a long time. In most cases, the basis of cosmetic products is oil bases of various composition, SFM, emulsifiers, solubilizers, structure and film forming agents, fillers, preservatives and other substances. Beneficial bioactive substances (BFM) and fragrances are added to many cosmetics. In this case, the main requirement for the quality of the cosmetic product is its beauty. Therefore, all substances created for cosmetics are subjected to toxicological examination. In order to ensure the microbiological stability of cosmetics, various preservatives are added to their composition. Microbiologists determine the type and amount of preservatives added for each cosmetic product. In order to increase the purchasing power of purchasing cosmetics and to ensure that the product is pleasant to use, various aromatic compositions are included in the product, and taste correctors are included in toothpastes and elixirs.

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