

Medical Innovative Technologies, Kiev, Ukraine
Radomska Szkoła Wyższa w Radomiu, Polska
Radom University in Radom, Poland

HARDWARE METHODS IN COSMETOLOGY

PROGRAMS OF FACE CARE

**N. Chuhraev, W. Zukow, N. Samosiuk, E. Chuhraeva,
A. Tereshchenko, M. Gunko, A. Unichenko, A. Paramonova**

Edited by

**N. Chuhraev
W. Zukow
N. Samosiuk
E. Chuhraeva
A. Tereshchenko
M. Gunko
A. Unichenko
A. Paramonova**

Kiev, Radom 2016

Medical Innovative Technologies, Kiev, Ukraine
Radomska Szkoła Wyższa w Radomiu, Polska
Radom University in Radom, Poland

HARDWARE METHODS IN COSMETOLOGY

PROGRAMS OF FACE CARE

**N. Chuhraev, W. Zukow, N. Samosiuk, E. Chuhraeva,
A. Tereshchenko, M. Gunko, A. Unichenko, A. Paramonova**

Edited by

**N. Chuhraev
W. Zukow
N. Samosiuk
E. Chuhraeva
A. Tereshchenko
M. Gunko
A. Unichenko
A. Paramonova**

Kiev, Radom 2016

Chuhraev N., Zukow W., Samosiuk N., Chuhraeva E., Tereshchenko A., Gunko M., Unichenko A., Paramonova A. Hardware methods in cosmetology. Programs of face care. Chuhraev N., Zukow W., Samosiuk N., Chuhraeva E., Tereshchenko A., Gunko M., Unichenko A. eds. Medical Innovative Technologies, Kiev, Ukraine. Radomska Szkoła Wyższa w Radomiu. Kiev. Radom. 200 p. ISBN 9781365147661. DOI <http://dx.doi.org/10.5281/zenodo.53230>

Medical Innovative Technologies, Kiev, Ukraine
Radomska Szkoła Wyższa w Radomiu
Radom University in Radom

HARDWARE METHODS IN COSMETOLOGY
PROGRAMS OF FACE CARE

N. Chuhraev, W. Zukow, N. Samosiuk, E. Chuhraeva, A. Tereshchenko, M. Gunko, A. Unichenko, A. Paramonova

Reviewers:

prof. zw. dr hab. med. V. Sobetskiy (Ukraine), MD, Professor V. Sobetskiy
prof. zw. dr hab. med. A. Vladimirov (Ukraine), MD, Professor A. Vladimirov

Edited by

N. Chuhraev, W. Zukow, N. Samosiuk, E. Chuhraeva, A. Tereshchenko, M. Gunko, A. Unichenko, A. Paramonova

In the proposed manual are systematized applications of various physical factors (ultrasonic waves, magnetic fields and optical streams, local exhaustion - vacuum, electric impulses and mechanical oscillations) in cosmetology and esthetic medicine. The described technique of the mixed and combined use of these factors in integrated programs of face care, are considered the common principles and are made concrete recommendations about face care. The practical techniques of skin care are described, developed and approved by employees of SMC "Medical Innovative Technologies" about devices of characteristic production.

This book is intended for cosmetologists, doctors and medical workers of a wide profile, and also for use as an application guide for the devices MHT-11, KOCMIIT, MBT-01 and MBT-01 MT (MTB, MTΦ), AЭCT-01.

N. Chuhraev — the director of SMC "Medical Innovative Technologies", doctor science in Medical Psychology.
W. Zukow — MD, doctor science, UMK, Torun, Bydgoszcz.
N. Samosiuk — the doctor-physiotherapist of SMC "Medical Innovative Technologies", Candidate of Medical Sciences.
E. Chuhraeva — the doctor-physiotherapist of SMC "Medical Innovative Technologies", Candidate of Medical Sciences.
A. Tereshchenko — the research fellow of SMC "Medical Innovative Technologies".
M. Gunko — the doctor-physiotherapist of SMC "Medical Innovative Technologies".
A. Unichenko — the research fellow of SMC "Medical Innovative Technologies".
A. Paramonova — the research fellow of SMC "Medical Innovative Technologies".

© The Author(s) 2016.

This articles is published with Open Access. Medical Innovative Technologies, Kiev, Ukraine and Radomska Szkoła Wyższa w Radomiu, Poska, Radom University in Radom, Poland.

Open Access This articles is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.



Attribution — You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work). Noncommercial — You may not use this work for commercial purposes. Share Alike — If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.

Zawartość jest objęta licencją Creative Commons Uznanie autorstwa-Użycie niekomercyjne-Na tych samych warunkach 3.0

Publishing House: Radomska Szkoła Wyższa w Radomiu, Radom University in Radom Str. Zubrzyckiego 2 26-600 Radom Tel.: +48 48 383 66 05 med@rsw.edu.pl
Printing House: Radomska Szkoła Wyższa w Radomiu, Radom University in Radom Str. Zubrzyckiego 2 26-600 Radom Tel.: +48 48 383 66 05 med@rsw.edu.pl

ISBN 9781365147661

DOI <http://dx.doi.org/10.5281/zenodo.53230>

200 s. Liczba znaków: 248 000 (ze streszczeniami i okładką). Liczba grafik: 70 x 1 000 znaków (ryczalt) = 70 000 znaków.

Razem: Liczba znaków: 318 000 (ze streszczeniami, okładką i grafikami) = 7,95 arkuszy wydawniczych.

200 p. Number of characters: 248 000 (with abstracts). Number of images: 70 x 1000 characters (lump sum) = 70 000 characters.

Total: Number of characters: 318 000 (with abstracts, summaries and graphics) = 7,95 sheet publications.

Content:

INTRODUCTION	7
CHAPTER 1. FACE	11
1.1. Skin. Structure and functions.....	15
1.2. Face muscle	18
1.3. The neuro-receptor apparatus	18
1.4. Blood and lymphatic system of the face	19
CHAPTER 2. PHYSICAL FACTORS USED IN COSMETOLOGY	23
2.1. Optical rays in the visible and infrared ranges of the spectrum	24
2.2. Electric current	27
2.3. Ultrasound	32
2.4. Magnetic field	40
2.5. Vacuum	41
2.6. Biomechanical stimulation	44
CHAPTER 3. PRACTICAL RECOMMENDATIONS OF APPLICATION OF HARDWARE METHODS IN THE COSMETOLOGY	47
3.1. Lymphatic drainage	47
3.2. Vacuum massage of the face	51
3.3. Microcurrent procedures	54
3.4. Myostimulation	59

3.5. General recommendations 61

3.6. Symptoms of age-related changes in the face 66

CHAPTER 4. DEVICES FOR CARRYING OUT COSMETIC TREATMENTS FOR THE FACE PRODUCED BY LLC "THE NMC "MEDINTECH" 68

4.1. Vacuum massager MBT-01 68

4.2. Cosmetological combine MHT-11 71

4.3. The description of operating modes of the device in programs for face care 73

CHAPTER 5. SPECIAL METHODS TO CARE FOR SKIN WITH THE DEVICE MIT-11 (model COSMO) 84

5.1. Care for dry, aging, sensitive skin 85

5.2. Care for oily skin type 88

5.3. Care for problem skin, reduction of acne 90

CHAPTER 6. APPARATUS "KOCMIT" for face using 92

6.1. A description of the apparatus "KOCMIT" modes in the program for face care92

6.2. Recommended scheme of microcurrents exposure on the device's "COSMIT" 103

CHAPTER 7. THE DEVICE FOR MICROCURRENT STIMULATION OF THE MBT-01 MT (three versions) 117

7.1. Recommended schemes to perform procedures on the unit MBT-01 МТФ (MBT-01 МТ, MBT-01 МТВ)	121
-----------------------------------------------------------------------------------------------------	-----

CHAPTER 8. THE DEVICE FOR MYOSTIMULATION, АЭСТ-01 model “FACE“	139
-----------------------------------------------------------------------------	------------

8.1. Practical guidelines for the implementation of procedures on the device АЭСТ-01	143
--------------------------------------------------------------------------------------------	-----

8.2. Problems of top part of the face	144
---------------------------------------------	-----

8.3. Problems of lower part of the face	153
-----------------------------------------------	-----

8.4. Assessment the level of anxiety and depressive patterns, and compensation methods in programs of the face care	159
---------------------------------------------------------------------------------------------------------------------------	-----

References in orygonal	170
------------------------------	-----

References in transliteration	174
-------------------------------------	-----

MIT-EF2 Electroporation	179
-------------------------------	-----

“KOSMIT”	180
----------------	-----

MBT-01	181
--------------	-----

MIT-C	182
-------------	-----

MIT-MT (model MLT)	183
--------------------------	-----

© The Author(s) 2016.

This article is published with Open Access. Medical Innovative Technologies, Kiev, Ukraine and Radomska Szkoła Wyższa w Radomiu, Polska, Radom University in Radom, Poland.

Open Access This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.



Attribution — You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work). Noncommercial — You may not use this work for commercial purposes. Share Alike — If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.

INTRODUCTION

Our long-term experience of efficient physical methods application in medical rehabilitation and cosmetology, numerous researches conducted in the leading scientific centers of the world, on the determination of magnetic fields action mechanism, an optical stream, electric currents and ultrasonic fluctuations on biological tissue.

All these investigations have stimulated the development of recent trends in a hardware cosmetology and the creation of high-performance technologies of facial and body care, for the purpose of delay of the aging processes in a human body and providing their attractive esthetic look. In the technologies developed by us, there are three principles. Firstly: a systemic many-level approach to the definition of the main influence zones, while setting procedure. Secondly: physiologically reasonable choice of physical factors, for restitution of work on biological systems of a human body. Thirdly: physiologically reasonable resonance principle of a parameters choice is a form of a signal, its amplitude or power, frequency of modulation or duration of an impulse, spectral range and others.

Today it is hard to find at least one expert, who is working in a cosmetology and would call into question high performance of the application of a machine cosmetology in the fight for beauty, a retardation of aging and preservations of youth. The hardware cosmetology gives the chance not only to improve the appearance of the

skin but also to restore the natural mechanism of work of the functional systems responsible for the skin, fat deposits and muscular tissue.

For the achievement of optimal result on the care of person, neck and “decollete” zone of at implementation of procedures with the use of vehicle methods the observance of the next basic stages needed:

Cleaning and deintoxication skin and organism on the whole. An improvement of microcirculation of liquid is in the zone of influence.

An improvement of innervation of the skin is within the area of influence. Stimulation of exchange processes is in a skin and muscles (functional systems related to them), improvement of their feed and satiation water.

Protection of skin from external influences using masks and creams.

In case of physical factors application in cosmetology it is necessary to observe next basic principles:

Physiology - procedure choice determined by the state of the skin, problems with her normal functioning, task and expected result that you want to get, presence of vehicle facilities, that provides influence the set physical factor with parameters optimal for normalization of the function of the certain physiological system.

Adequacy of influence is a choice of a physical factor and methodology of realization of procedure must correspond to adaptation possibilities of the organism of the client.

Complexity and system of vehicle cosmetology - a procedural complex must provide affecting different systems of the organism. To envisage not only local but also reflex affecting internal organs, the aesthetic state of skin and muscles of the face of client depends on work of that.

Early use - reasonable application of physical factors in the early stages considerably improves results and abbreviates a number of procedures.

Sequence - the variety of application of procedures it is necessary to choose, taking into account the pre-arranged effect, synergism, at the action of different physical factors and results of previous procedures.

Periodicity - depending on the state of the skin and her rehabilitation potential originally conducted 5-15 procedures. Procedures, as a rule, are conducted 2-3 times per a week. An interruption between procedures must be about 2-4 weeks. Subsequent "supporting" procedures conducted 3-5 one time per a month.

Optimal dosages - appointing duration of manipulation to take into account the criteria of power/dose/effect and physiological features of work of the organism.

The dynamic quality of the use - to avoid getting of organism used to influence, during all course it is necessary to change the parameters of the recipe of procedures depending on the physiological features of the zone of procedure and her reaction on a physical factor.

Individual approach - it is desirable to take into account biological rhythms, type of skin, her state, sexual and age-related features of clients while setting procedures. It is crucial to consider the psychosomatic state of client and presence of syndrome of the hidden depression or chronic tiredness while drafting the program of face care.

Psychosomatic correction - often it is enough customers with the syndromes of the hidden depression or chronic tiredness are present; it reduces the efficiency of the conducted procedures considerably. For indemnification of it providing the maximal comfort level of realization of procedures and application is needed in the complex program of physical factors and modes, offering indemnification of the hidden

depression and decline of the degree of the syndrome of chronic tiredness.

Relaxation - the deeper relaxation for a client, the more efficient procedure. Optimal is a variant when a client sleeps during the procedure.

Decrease of negative indications level - before the beginning of procedures and after every cleaning procedure, it is necessary to execute cleaning of facial skin alkaline solutions (Ph no less than 5,5), to execute the massage of zone of venous outflow (from a mastoid to the connected zone) in the flow of 1-2 minutes from every side and in every 30-40 minutes of work with a customer, to execute the easy massage of lymph nodes of person in a flow 0,5 - 1 minutes from every side.

Care of person with the use of the techniques and vehicles, worked out by a firm "Мединтех" (Medintech), are the newest technologies of effective work in cosmetology. In combination with hand methodologies and individually neat cosmetic vehicle, procedures allow reaching staggering results.

CHAPTER 1. FACE

1.1. Skin. Structure and functions

Skin is the subject of cosmetologists and object of their work. Therefore, we considered necessary to give general information about the structure of skin, its functions and properties.

Being the largest organ of the human body, a skin executes the high number of functions, the main ones are:

- protective;
- respiratory;
- excretory;
- thermoregulatory;
- biochemical synthesis of organic compounds;
- reflex regulation of the internal organs;
- reflex indication of the status and function of internal organs.

Functions of the skin must be taken into account in the appointment procedures and don't try to impose execution which is not typical for it.

Skin consists of the epidermis, dermis and hypodermis.

Epidermis consists of cells of various shapes and structures, which represent specific phases of cell life. Basal, spinous, granular, translucent, cornified – are successive layers of the epidermis.

The basal layer of the skin located directly on the basal membrane and consists of a single layer of basal cells, inside of which are pigment cells — melanocytes. Melanocytes synthesize pigment — melanin. Basal cells have a cylindrical shape, an oval or elongated nucleus with lots of chromatin.

Spinous skin layer located above the basal layer and consists of 5-10 rows of spinous epidermocytes. It is polygonal cells with numerous cytoplasmic spikes. Cells of basal and spinous (deep divisions) layers multiply by mitotic division, so they are collectively called the germ layer. The epidermis renewed every 19-20 days.

Granular skin layer resides above the germ layer. It consists of three or four rows of relatively flat cells, and in the cytoplasm of these cells is keratohyalin granules. Keratohyalin is a protein with a significant amount of essential amino acids (arginine, lysine, histidine, cysteine), it formed a cornfield substance-keratin.

Shiny skin layer consists of three or four rows of flat cells. The cytoplasm of these cells saturated with protein substance-eleidin, which is formed from keratohyalin and contains many disulfide groups, which giving the skin glow.

The cornfield skin layer is composed of the plurality of rows of keratinized cells - horny scales. Scales contain keratin is more dense substance than lanolin and air bubbles. Keratin is a protein with a large amount of sulfur and has high resistant to various chemicals. The stratum corneum is fully updated every 7-11 days. With a lack of retinol (vitamin A) in the body dramatically strengthens the processes of keratinization.

The basal layer provides cell renewal, so it is sometimes called the germinal layer. Germ cells continuously divide and gradually moving to the surface. Among germ cells of the basal membrane are also melanocytes and Langerhans cells, which are an important component of the immune system. Melanocytes produce melanin, the pigment that determines skin color.

There are no any blood vessels in the epidermis, so the nutrients and water transferred into it from the dermis.

The epidermal barrier of the skin consists of several layers of dead cells, which impregnated with lipids (ceramides). The stratum corneum lipids are the main keepers of moisture in the skin (lipids pass through the transepidermal route of entry of substances into the dermis).

The penetration of substances through the skin can be done in three ways:

- trans-epidermal;
- through hair follicles;
- through the excretory ducts of the sebaceous and sweat glands.

The dermis is located below the epidermis and separated from it by a basement membrane. It has two unclearly differentiated between themselves layers: papillary and reticular. Sweat and sebaceous glands, and also hair follicles located at various depths in the dermis. The dermis permeated by collagen and elastin fibers, the space between them filled with mucopolysaccharide gel which can hold large amounts of water with the help of hyaluronic acid.

The cellular elements of the dermis: fibroblasts engaged in the production of various enzymes for the synthesis and degradation of the intercellular substance; macrophages, which produce regulatory cytokine molecules, perform an immune function; mast cells produce, store and secrete biologically active substances which are involved in the regulation of cell-cell interactions.

Cutaneous fat is the deepest layer of the skin. Fat cells surrounded by connective tissue and network of blood and lymphatic vessels. The hypodermis protects the body from water loss.

Skin appendages. Skin appendages or its derivatives are sweat and sebaceous glands and hair. Sweat glands are involved in

thermoregulation of the organism, and also in the maintenance of homeostasis and excretion. The secretory part of sweat glands located in the reticular layer of the dermis, excretory duct opens in the epidermis of the sweat pores. With sweat from the release body urea, ammonia, small amounts of proteins, proteolytic enzymes, sodium ions, potassium, chlorine, bicarbonate and other substances.

Sweat glands divided into eccrine and apocrine. Apocrine glands begin to function during puberty.

They produce a small amount of secretion, which, standing out, determine the specific smell of the body.

The sebaceous glands are everywhere, lubricating them secret skin and hair. They situated more superficially, on the border of the papillary and reticular layers of the dermis. The sebaceous glands relate to the glands of holocrine type: in the process of secretion, they are destroyed and included in the part of the secret. A significant influence on the function of the sebaceous glands has hormone system. Androgens stimulate the activity of sebaceous glands, estrogens- reduce.

Hair covers almost the entire surface of the human body. They are absent on the palms, soles, red border of the lips. Hair consists two parts: root and stem. Stem of the hair is formed of the cortex and cuticle and situated above the skin surface. Root located in the skin-dermis, reaching to the hypodermis. It located in the hair sags or follicle. The follicle surrounded by the hair bag, which consisting of the connective tissue. In the hair bag opens the duct of one or more sebaceous glands.

1.2. Facial muscles

Facial muscles divided into two groups: mimic and chewing. For the cosmetologists more interesting are next muscles:

Occipital-frontal muscle has occipital and frontal abdomen, which are connected between themselves of the aponeurosis - tendon helmet. Occipital abdomen started from the air of the higher lines of occipital bone and woven into the posterior segments of the tendon helmet. Frontal abdomen begins of the tendon helmet and end in the skin of the eyebrows. In the reducing frontal muscle pick up an eyebrow and the skin of the forehead becomes transverse folds.

Muscle, wrinkled brow, begin of the brow soul frontal bone and attached to the skin of the eyebrow.

The circular muscle of the eye surrounds the eye slit. It consists of two parts – inner and outer. First lies in eyelids, second - outside theirs. The outer part of the muscle in the reducing gathers skin into folds, which formed “crow's feet.”

Nasalis muscle has two parts: transverse and alar. The alar part is attached to the skin of the wing of the nose; a transverse part goes up to the bridge of the nose and it combines with the opposite of the same name muscle.

The muscle that raises the upper lip, starting from the infraorbital region of the upper jaw and attached to the skin of the nasolabial fold.

The circular muscle of the mouth forms the fleshy part of the lips. It closes lips, pressing them to the teeth. In its reduction, lips are drawn. Muscle plays a major role in the eating and is decreasing in the talk and when you close mouth.

The previous muscle partially covers mentalis. Starts from the alveolar elevations of the mandible incisors and attached to the skin of the chin.

The muscle that lowers the lower lip, partially covered by the previous muscle. Begins at the edge of the mandible and is attached to the brink of the bottom lip. At the contraction, this muscle turns the lower lip. During this better outlines lip-chin fold.

Muscle, which lowering the angle of the mouth, also starts from the edge of the lower jaw, but are attached to the skin of the corner of its mouth. Being reduced, it lowers the angle of the mouth.

The zygomatic muscle is the fixed part attached to the zygomatic bone, and movable – to the skin of the corner of his mouth. It is woven into the circular muscle of the mouth. While reducing pulls corner of the mouth upward, whereby the mouth stretched, and the corners of the mouth lifted.

Square muscle of the upper lip attached by the unmoved end to the outer surface of the zygomatic arch, a movable – woven in thickness of the skin of the nasolabial fold. Contraction of this muscle raises the upper lip, dilates nostrils.

The Buccinator forms the soft side walls of the mouth. It starts at the edges of both jaws. Some muscle bundles of them head to the upper lip, the other to the bottom. Around the mouth these bundles intersect. The Buccinator pressed cheek to the teeth and involved in vigorous blowing of air from the mouth

The masseter muscle starts from the lower edge of the zygomatic arch: attaches to the lateral surface of the coronoid process of the lower jaw, and also chewing tuberosity of the mandible.

The temporal muscle started from the temporal surface of greater wing of the sphenoid bone, scale of the temporal bone and attached to the apex and medial surface of the coronoid process of the mandible.

For cosmetologists, the greatest interest is the mimic muscles, which is situated under the skin. One end of mimic muscles attached to the bones

(unmovable end), the other – to the skin (movable end). Facial muscles are smaller and more tender than chewing. From the reduction of facial muscles affects the expression of our face. Sagging, weakening the muscle tissues of the face gives age.

1.3. The neuro-receptor apparatus

Skin is rich in nerve fibers and their endings. Spinal, cranial and autonomic nerves branch in it. The primary plexus localized in the subcutaneous fat, and its branches reach the skin's texture. In the papillary layer, nerve fibers form a dense network, from which radiates the nerve fibers to the hair follicles, glands, blood vessels, the epidermis.

1.4. Blood and lymphatic system of the face

For the normal functioning of tissues and organs of the body, each cell must obtain the necessary nutrients, oxygen, minerals, and excrete their waste products from cells (carbon dioxide, toxins, etc.). This work in the body performs blood and lymph. Blood, lymph and tissue fluid form the internal environment of the body, wherein the relative standing of the composition and physicochemical properties, which creates relatively constant conditions of existence of the cells of the body.

The circulatory system of the skin consists of several networks of blood vessels. The pink color of the skin determines the blood, which flowing through the capillaries. Nutrients and water transferred to intracellular space from blood vessels. Part of the moisture remains in the dermis, and certain amount enters into the epidermis and evaporates from the surface of skin.

Blood consists of plasma (the liquid portion) and formed elements: erythrocytes, leukocytes and platelets. The total amount of blood in the body is maintained at a relatively constant level and is 6-7% of the total body mass. By increasing the volume of circulating fluid in the body portion of the introduced fluid immediately report the points, the greater part goes first in tissue, then gradually enters the blood and is excreted by the kidneys.

Heart and vessels ensure continuous movement of blood in the organism. Distinguish two circles of blood circulation: big and small.

The big circle begins from the left ventricle of heart, includes an aorta, arteries, arteriole, capillaries and veins of all body and comes to the end with two hollow veins which fall into the right auricle. The small circle of blood circulation begins from the right ventricle, includes a pulmonary artery, pulmonary arteriole, capillaries and veins and comes to the end with pulmonary veins which fall into the left auricle.

The movement of blood is caused by the reduction of heart, a difference of pressure of blood in vessels (blood flows from vessels where pressure is higher, to vessels where the pressure is lower), the voluminous mass of the circulating blood, a vascular tone and other factors.

During the rest of a muscle blood flows in it on slight numbers of capillaries which are open, the others – are closed, and blood does not pass.

At the rest position, there is a periodic change of "duty" capillaries. Through the thin walls of capillaries, there is an absorption of the substances which dissolve in blood.

The blue blood from a forward surface of the person flows through a lobby or a skin facial vein. It begins between eyebrows, goes to the parties of a nose through a cheek and falls at an angle of the lower jaw. Here the forward facial vein connects to a back facial vein, which goes from the temporal area. Both veins form the general trunk going on lateral faces of a neck to a subclavian zone.

Violation of venous outflow of blood leads to the emergence of unpleasant pain and increase of intracranial pressure. It is necessary for the reduction of unpleasant feelings and increase of efficiency of procedures at the beginning of the performance of procedures and each 30-40 minutes of procedural time to carry out easy, short (1-2 minutes) massage of a zone of venous outflow of blood.

Lymphatic system supplements venous system: large proteinaceous particles which can't get through the walls of blood capillaries, come to a lymphatic network.

Lymphatic system of skin consists of two networks of lymphatic capillaries and the taking-away lymphatic vessels. The superficial network of lymphatic capillaries is located in a papillary layer, deep – in

the lower layer of the dermis. An arrangement of lymphatic vessels it is given. Lymphatic vessels of the person, creating numerous branches, go from top to down and the parties from the median line. One group of lymphatic vessels originates in the skin of the external part of the top and lower eyelids, malaria area and collects a lymph in the parotid glands. Another group of lymphatic vessels originates in an internal part of the top and lower eyelids, cheeks, upper lip, the corners of a mouth and collects a lymph in submaxillary knots. The third group of lymphatic vessels, beginning from a lower lip and chin, collects a lymph in chin knots.

Lymphatic system supplements venous system: rather large particles participating in a metabolism which can't be soaked up in the blood through the walls of blood capillaries, are transported through lymphatic vessels.

Lymphatic system begins with an extensive network of the closed capillaries in which walls possess high permeability, ability to soak up colloidal solutions and suspensions. Lymphatic capillaries fall into lymphatic vessels on which the lymph flows to two large lymphatic channels – cervical and chest, falling into subclavian veins. Lymphatic vessels serve only for the outflow of the lymph, which is to return to blood which came to liquid fabrics. Lymphatic vessels carry out the functions of the drainage system deleting excess of the fabric liquid which is in bodies.

Lymphatic system begins with a set of the small closed capillaries in all tissues and organs. These capillaries fall into the lymphatic vessels. Vessels move a lymph to lymph nodes. There it passes specific cleaning and is enriched with immune cages. Then the lymph is going to two large lymphatic canals – cervical and chest. They fall into subclavian veins. Lymphatic vessels serve only for outflow of lymph, which is carried out the functions of the drainage system deleting excess of fabric liquid.

The lymph flowing from different bodies and fabrics has various structures depending on the features of their metabolism and activity. Lymph formation connected with the transition of water and the substances dissolved in plasma of blood from blood capillaries in tissue, and then from fabrics in lymphatic capillaries. In normal conditions in an organism, there is a balance between the speed of a lymph formation and speed of outflow of lymph from tissue. The outflow of lymph from lymphatic capillaries made on lymphatic vessels which, merging, form two large lymphatic channels falling into the veins. In such way, the liquid which left blood in capillaries again comes back to the blood course, bringing some products of a cellular exchange.

In the movement of lymph play a role:

- bending and extension of legs and hands in the working and walking, reduction of the skeletal muscles surrounding lymphatic vessels that cause rhythmic reductions of walls of lymphatic vessels;
- pressure – elasticity of the surrounding tissue;
- negative pressure in a chest cavity and increasing the volume of the thorax during inspiration, which causes expansion of a chest lymphatic channel that leads to suction of lymph from lymphatic vessels;
- the existence of valves in the lymphatic vessels interfering the return current of lymph;
- smooth muscles in walls of larger lymphatic vessels.

It is vital for an organism that blood and lymphatic systems worked normally. If enough nutrients and oxygen do not come to cells, and respectively carbon dioxide and products of a metabolism are not removed from them, work of sodium-potassium pump of a cell, and thereof electrolytic balance, leading to the hypostasis of tissues is broken. Insufficiency of blood supply to tissues and poor outflow of interstitial fluid through the veins and the lymphatic system leads to disruption of the trophic tissue.

CHAPTER 2. THE PHYSICAL FACTORS APPLIED IN COSMETOLOGY

Depending of penetrating ability, physical factors can be divided into 3 main groups:

- factors of deep penetration: optical rays in the visible and infrared ranges of the spectrum, electric currents, ultrasound, magnetic field, heat (infrared radiation, ozokerite, paraffin), vacuum, biomechanical stimulation;
- factors of superficial influence: optical rays of ultraviolet ranges of the spectrum, a local darsonvalism, pneumo-massage, superficial irrigations and applications;
- factors of surface-humoral action: balneological and peloids-procedures.

In this methodical grant, we focus on the consideration of only some factors of the first group of physical factors.

2.1. Optical rays in the visible and infrared ranges of the spectrum

Optical rays in the visible and infrared ranges of the Phototherapy (chromotherapy, light therapy) – the use for the medical, preventive and cosmetology purpose of electromagnetic waves of optical range of the spectrum.

The wavelength determines the biological effect of phototherapy.

In cosmetics chromotherapy option provides using of diodes that emit light in a specific range of led emitters.

The secret of chromotherapy - the beneficial effects on the human body light and color. Colored light streams with varying degrees of intensity emit electromagnetic radiation with a specific energy. The human body easily absorbs electromagnetic radiation in turn at the cellular level.

The beneficial influence of various streams of color was revealed still by our ancestors. In the color resorted to treatment already in Ancient Egypt, India and China. A chromotherapy cradle the city of the Sun in Ancient Egypt. Temples in it were under construction so that the light of the sun could refract in various colors. Only in the 20th-century scientists confirmed that the color has a beneficial influence on an emotional condition of the person, on his hormonal and nervous systems. Also, chromotherapy successfully fights against many cosmetic shortcomings. For this reason, chromotherapy was widely used so in cosmetology.

Chromotherapy – universal procedure. It has a beneficial influence on each person, but color and light, especially effectively work if they are in harmony with a psychosomatic condition of the client, depending on, whether a certain color is pleasant or not.

The color stream getting into organism tissues intensifies photochemical processes and restores favorable bioenergetic level. A

chromotherapy will be especially effective in the treatment of psychosomatic problems (sleeplessness, stresses, the latent depression, chronic fatigue). Also, chromotherapy possesses the photoactivation properties, and also normalizes the level of toxins in an organism. Chromotherapy relieves of skin diseases, restore its tone and elasticity, and also help to get rid of cellulite.

Most effectively in cosmetology application of light therapy in the following ranges of a spectrum:

The blue – with the wavelength of 0,40 - 0,50 microns,

The green – with the wavelength of 0,51 - 0,55 microns,

The red – with the wavelength of 0,63 - 0,7 microns.

The infrared – with wavelength more than 0,7 microns.

Blue range (wavelength of 0,40 - 0,50 microns)

Blue color is the calming color, promotes physical and intellectual relaxation, creates the atmosphere of safety and trust.

Blue radiation completely is late by epidermis and dermis. It is selectively absorbed by molecules of the pyridone nucleotides - hemopofirin. The subsequent activation of a respiratory chain promotes strengthening of glycolysis and a lipolysis in cages, increases the activity of P450 cytochrome and accelerates bilirubin photodestruction processes that conduct to its disintegration to the substances which are easily output from an organism and not having a neurotoxic effect at jaundice in newborns (a neonatal hyperbilirubinemia).

Blue color slows down psychological activity. It lowers excitability of various nervous educations, slows down the speed of nervous conductivity and possesses the anesthetizing action.

Green range (wavelength of 0,51-0,55 microns)

Green color East wise men considered the highest on the vibrations which are positively influencing the center of sincere energy of the person.

Target organs, on which green color effects are: nerves, eyes, bronchial tubes, muscles, bones, sinews, enzymes and hormones.

Effects of chromotherapy in the green color:

- The harmonizing impact (has the refreshing and at the same time calming effect) on an organism;

- Antiseptic and antimicrobials impact on skin;
- Strengthens and stimulates regeneration of muscle and fabric;
- Has the stimulating effect on production of collagen;
- Beneficial for the eyes.

Red range (wavelength of 0,63-0,70 microns)

The red — (comes from the same old Slavic root as the words for "beautiful" and "excellent"), the color with the minimum frequency, perceived by a human eye.

Red color gives incentive, supplies with strong energy, promotes activity, confidence.

At influence of the color in the red range on tissue have a value of the total energy effect on the level of molecules and atoms, and a powerful energy – shock effect, the influence of an electromagnetic field, photochemical, photo-electric effects.

Effects:

- tones up the withering face skin slow down age changes of skin (regeneration stimulation);
- improves microcirculation and a hyposensitization;
- stimulates the development of nonspecific factors of immunity;
- intensifies functions of endocrine bodies.

Infrared range (wavelength more than 0,70 microns)

Infrared — spectral range, practically is invisible for a human eye.

Light of an infrared range stimulates oscillatory processes in organic compounds and, respectively, stimulates biochemical reactions in an organism

Stimulates activity of the drugs injected in a scope, strengthens their biochemical action, warms up area of the procedure with a possibility of an increase of local temperature. Generally, his action is shown at the level of molecules.

Effects:

- stimulates introduction and absorption of preparations on a skin surface, especially at the dry and withering skin;
- stimulates regeneration and biochemical reactions;
- improves microcirculation and a hyposensitization;
- stimulates the development of nonspecific factors of immunity.

2.2. Electric current

Electric current – the organized (directed) movement of charged particles – electrons, ions, minerals, free radicals under the influence of internal or external electric potential.

Application of electric current in cosmetology based on a feature of the management of all processes in an organism through a system of change of the potentials and ability of tissues of a living organism to carry out electrical impulses.

Начало формы

The composition of various tissues and environments of an organism includes ions, polar and nonpolar macromolecules and dipoles of water. As tissues have different concentration and mobility of free charged particles, they possess different conductivity. Nature of interaction of electric current decides on various tissues of an organism by their electrical properties. Thus, it is defined by the concentration and mobility of ions.

The ordered and directional driving of ions in tissues under the influence of electric current leads to a change of the functional properties of nervous and muscle tissues. Round the currents extending in tissues of an organism the electromagnetic fields capable of leading to a change of physical and chemical properties and metabolic activity of cages and fabrics formed.

The impact of electric currents on a human body is carried out using immediate contact of tissues with the electrodes (which are conductors of electric current) or through various physical environments (water, cream, ointment).

Skin has various electrical conductivity (EC) depending on a number of factors, such as thickness, intensity fat - and a diaphoresis, concentration of inorganic salts in tissue liquid, water content. The greatest resistance to electric current is shown by the horn and brilliant layers as they differ in high content of lipids and low humidity.

Dry skin badly carries an electric current, and at its humidification, an electrical conductivity considerably increases. As a rule, the majority of ions moves on the course of nervous tissue, with blood or a lymph on capillaries or vessels. Considerably hypostasis, a hyperemia, existence of a magnetic field in an influence zone increase electric conductance of skin.

Dry skin badly carries electric current, and at its humidification, an electrical conductivity considerably increases. As a rule, the majority of ions moves on the course of nervous tissue, with blood or a lymph on capillaries or vessels. Hypostasis considerably is raised by the electric conductance of the skin, a hyperemia, the existence of a magnetic field in an influence zone.

The place of imposing of electrodes is defined by that effect which you want to receive:

- for the strengthening of an innervation of skin and increase of its excitability electrodes are imposed on a projection of the corresponding nerves on skin, as a rule "-" impose on remote sites, "+" on a nerve ganglion or a zone of an innervation (microcurrent procedure);
- for the realization of a myostimulation of muscle - electrodes are established or on the symmetric muscles (the center of muscle) or "+" on an innervation zone (a muscle attachment) "-" on the center of a muscle;
- for the realization of an electrophoresis or an electroporation - electrodes are established "+" on an innervation zone (an area of venous outflow) "-" on the center of a zone of an electrophoresis or electroporation.

For an electrotherapy various methods of electric shocks are used by the electric current, each of which has particular features (tab. 1).

Table 1. The basic parameters of electric current for cosmetic procedures

Name of the method	Characteristics of the current	Physico-chemical reactions of the organism	Cosmetic effects
Galvanization (Polarization)	Constant current: 3 mA - electrodes to 20 cm ² , 50 mA - electrodes of 20-300 cm ² . Voltage up to 50 V	The movement moreover, accumulation of electrically charged particles in the tissues	Improvement of turgor of the skin, change of Ph of the skin, cleaning of the skin
Electrophoresis (Iontophoresis)	Monopolar direct or pulse current: 3mA – electrodes to 20cm, 250 mA – electrodes 20-300 cm ² and voltage up to 60V	Introduction of preparations in the form of charged particles in the tissue; change of polarization of cellular membranes	The introduction of preparation in the superficial layers of skin and performance of the process of electrolysis. Increased blood and lymph circulation, improvement of metabolic-trophic and transport processes, regenerative abilities of tissues
Microcurrent procedure	Alternating or unipolar pulse current with pulse duration	Oscillating motions of electrically active particles	Improvement of circulation of the intercellular liquid, blood and lymph,

	0,1-1,0 ms and with a current up to 1000 mk and voltage to 30 V	in cells and tissues, liquid tissue ionization, the introduction of electroactive preparations.	increase of the content of oxygen in skin, vasomotor, soothing, trophic, anti-itching, bactericidal action.
Electroporation	Monopolar pulse current with width of impulses about 0,4 ms, frequency of repetition is 2,2-3,0 kHz and current to 3000 mkA and tension up to 50 V.	The intensive introduction of electrically active preparations into the skin, ionization of tissue and liquid.	Improvement of circulation of the intercellular liquid, blood and lymph, increase of the content of oxygen in the skin, vasomotor, soothing, trophic, anti-itching, bactericidal action.
Electro-myostimulation	Pulse current of a myotonic form, current of 3-5 mA, amplitude tension till 200 V.	Rhythmic reduction of muscles.	Reduction and training of muscles, the vasodilating, anti-spastic, soothing, trophic-regenerating action, lymphatic drainage, electrolipolysis.
Electrolipolysis	Alternating current at fat splitting frequencies (frequency of 30-70 Hz)	Splitting of fats to glycerides	Splitting of fat in the subcutaneous cellulose

The procedure with the use of electric current has to make not less than 15 minutes per area or zone.

2.3. Ultrasound

Ultrasonic waves are mechanical oscillations of the environment with a frequency more than 20000 hertz.

In Russia, in Ukraine and other countries of the former USSR in medicine and cosmetology application of ultrasonic waves with a frequency of 22, 44, 880 or 2640 kHz and with a density of capacity no more than 1 W/cm² – high-frequency ultrasound or 5 microns for low-frequency is authorized. At excess of the power of ultrasound can come albumin coagulation. At the same time, it is necessary to notice that it is appropriate to use the power of ultrasound in several times higher than permissible for the destruction of fatty tissue.

In the European countries, the USA and Canada in most cases apply ultrasonic waves with a frequency of 1 or 3 MHz. Since 2008 devices with a frequency of ultrasound with 44 kHz have begun to appear. The devices made in China practically use all ranges of ultrasonic of vibrations.

Ultrasound – the only physical factor which can be applied to the performance of mechanical massage of a cell at the level of its membrane, uniform mixing of intracellular liquid and an intercellular matrix.

For the characteristics of ultrasound use the following parameters:

The frequency of ultrasonic fluctuations – number of alternations of compression and discharges in one second. It is measured in Hertz (1MHz=1000kHz =1000000 Hz)

The intensity of ultrasonic vibrations – amount of the energy transferred by an ultrasonic wave within 1 second through 1 cm² of the area which located perpendicularly to a direction of propagation of an ultrasonic

wave. It is measured in watts on a square centimeter (W/cm^2). A vibration amplitude – is the maximal shift of oscillating particles of the medium from their resting position. It is measured in micrometers (micron). It is applied to dosing of procedure at the application of ultrasonic vibrations with a frequency less than 100 kHz.

The depth of penetration of an ultrasonic wave corresponds to decrease of intensity of ultrasonic vibrations almost by 3 times. It depends on the type of tissue in which there is a distribution of bonds of the waves, its oscillation frequency and a slope angle of the plane of radiation to a skin surface.

The spread of the ultrasonic waves happens perpendicularly to a radiator surface. Reflection and refraction of ultrasonic waves occur on the border of two environments and depends on a difference of the density of environments in which there is the spread of ultrasounds– the more difference in density of medias, the refraction and reflection are more. Refraction happens, for example, at an origin of bonds waves through tissues of skin and fatty tissue. In case of refraction of ultrasounds, the wave is displaced and does not achieve the planned objectives, but any negative actions do not involve. At collision with a bone tissue, the ultrasound is reflected perpendicularly to the plane. Thus, the client can have unpleasant feelings owing to interference. That it did not occur, it is necessary to change the direction of a radiator. To reduce unpleasant sensations upon contact of the radiator with a bone tissue there is a need to apply a hydraulic lens, elastic capacity with water to decrease of unpleasant feelings (for example a balloon or a condom) which are placed between a radiator and skin.

The ultrasound with a frequency of 22 and 44 kHz has a depth of penetration to 10-12 cm (at application of express ridge nozzles possible to create from the surface wave that promotes peeling of solids on skin (effect of a peeling)), with a frequency of 880 kHz – to 3-5 cm, with a frequency of 2640 kHz – to 2-3 cm.

Ultrasound waves cause micro-vibration in an organism, the depth and force of which can be various. Ultrasound – the single physical factor which carries out micro massage of cages and tissues.

The application of ultrasound causes changes in the permeability of cell membranes, diffusion and an osmosis in cages, acid-base equilibrium, the transition of salts to gels; the dilation of blood vessels, accelerate blood circulation and lymph circulation, improvement of microcirculation, stimulation of processes of tissue metabolism; formation of biologically active substances, acceleration of oxidation-reduction processes, increasing the metabolic activity of cells, amplification of tissue respiration.

Defibrotide the action of ultrasound allows to use it for the treatment of fibrous cellulite. Thus, it is necessary to notice that use the power of ultrasounds in a few tens of times higher than permissible for the destruction of fatty tissue.

The mechanism of action of ultrasound

Three trial functions are in the of mechanism of action of bonds waves:

- the mechanical;
- the physical and chemical;
- the thermal.

The first function – MECHANICAL.

Taking into account that in passing ultrasound through tissues appear mechanical deformation oscillations, there is an increase in mobility of nearby biological structures. As a result observed effects of the growth of the fluidity of liquid environments (water, blood and lymph), improvement of permeability of flexible environments (skin, vessels, fatty tissue) and the emergence of the effect of "peeling" of the hard particles from a skin surface. The ultrasonic wave is capable of improving blood circulation, to strengthen an exchange between cells, to make active a metabolism in tissues and cell regeneration, to stimulate opening and clearing of sweat and sebaceous glands.

It is possible to provide penetration of various active agents, using ultrasonic waves. Under the influence of ultrasound "the skin depot" is formed and work of ionic pumps is sped up that leads to improvement of penetration of the active agent into the skin and its accumulation in it, from which they gradually come to blood.

The second function – CHEMICAL.

It deals with the ability of ultrasonic waves to activate processes of anabolism and catabolism. The ultrasound stimulates synthesis of protein in cells, restores the damaged tissues. If to use ultrasound in high doses, then it stimulates synthesis of proteinaceous chains in cells. The chemical function of ultrasound is useful also that the cosmetologist can economically use preparations – their expense under the influence of ultrasonic wave decreases, and absorption increases. Besides, the ultrasound has the chemical function of the catalyst: accelerates the speed of biochemical reactions and process of transport of substances, changes pH of tissues, reduces a local inflammation of the skin, kills bacteria, activates the mechanism of immunological protection.

The third function – THERMAL.

Locally increases temperature by 2-4 degrees, improves the capillary effect, a metabolism, blood and lymph circulation, increases excitability of the nervous terminations, carries out a relaxation of skin and muscles.

The basic ultrasound procedures in cosmetology

Ultrasonic peeling – application of ultrasonic waves to cleanse the skin from dead skin cells, the products of vital activity of grease and sweat glands, disposal of comedones.

As a result of intermolecular bonds in the field of ultrasonic waves of high intensity is resulted by cavitation (cold boiling) applied to the skin of contact environment that causes the destruction of the keratinized epidermal keratinocytes and their peeling. In combination with a rupture of bonds in dense fibrous structures and activation of an exchange of connecting tissue, such influence stimulates processes of a re-epithelialization of the epidermis.

The ultrasonic peeling for clients with age changes is especially effective: decrease in turgor and elasticity of skin (the polluted, dehydrated or loose skin, acne).

The ultrasonic peeling reduces hyperkeratosis which over the years becomes more expressed, small mimic wrinkles in a forehead and corners of eyes, promotes alignment of post-traumatic hypertrophic scars.

For carrying out ultrasonic peeling in the device MIT-11 and “КОСМИТ” are provided by the ribbed nozzle. Their application increases the area of simultaneous influence of ultrasonic vibrations and provides superficially passing of ultrasonic waves (skin and subcutaneous cellulose). Often the technique is applied in the field of a decollete where skin especially gentle and vulnerable.

Scheme of carrying out procedure of ultrasonic peelings:

Before a peeling applies special gel on skin or moistens with mineral water – for improvement of the conductivity of ultrasound waves. It is not necessary to steam out a face before the procedure. In case of dry skin, it is previously possible to put the loosening mask and to execute vibro massage. By the ridge nozzle (periodically moistening in water) cosmetologist several times passes across the main massage lines. It is possible to clean up the T-zone by the side surface of a ridge nozzle (effect of mechanical cleaning). The wave softens the remains of sebum, dead skin cells, effectively cleaning pores and a surface of the skin. Emphasis on problem zones!

The procedure takes no more than 7 minutes; it is painless, non-traumatic, suits for people of any age and doesn't demand the rehabilitation period.

After a peeling, there is no trace left, unlike the mechanical cleaning. Perhaps easy reddening of face skin, but it is not reflected in a constant rhythm of life, and the redness disappear in 10-20 minutes. That is why the ultrasonic peeling enjoys wide popularity: it is enough to visit the salon at lunch break, without being distracted from daily works.

The result will be already visible on completion of hardware cleaning the person looks much looked younger and freshened up. Skin become soft and elastic to the touch, and deep cleaning of pores during the time makes them visually less.

For fixing the effect, the procedure of ultrasonic peeling is recommended to repeat through four – seven days. An ultrasonic peeling is possible to carry out 1-3 times a month, but this period depends on specific features of the patient. To clients with oily type of skin, as a rule, ultrasonic peeling is carried out more often.

Ultraphonophoresis – introduction cosmetic and/or medicinal drugs with the help of ultrasonic vibrations.

The increase of permeability of the skin and the histohematogenous barriers caused by ultrasound creates favorable conditions for penetration of molecules of the injected drugs. The activity of penetration of molecules of a substance depends on their structure and degree of dispersion, the solvent nature. The entered substances at an ultra phonophoresis get into the epidermis and upper dermis through output channels of sweat and sebaceous glands. Approximately about 1 hour they start to flow into the blood and reach their maximum concentration after 12 hours, within 2-3 days are in tissues. Under the influence of ultrasonic vibrations, active elements get into the skin on the depth of 10 - 15 mm.

Procedure deeply moisturizes and nourishes skin.

Scheme of the procedure of ultrasonic phoresis:

Put a special gel (an ampoule concentrate) consisting of the enriched active ingredients on a face (body). Then ultrasonic emitter with a fungoid, the smooth nozzle is cleaned up a face (6-7 min.) or a body (till 10 minutes on a zone, totally no more than 30 minutes).

The ultrasound in combination with cosmetic preparations improves a metabolism and processes of regeneration. At the same time, there is a micro massage of the epidermis – allowing to achieve the effect of easy lifting.

Procedure quickly tones up and refreshes skin, deletes traces of stresses and fatigue. However, the long-term result is guaranteed only after a full course (from 6 to 15 sessions, depending on an initial condition of the skin).

When the skin problem associated with lack of moisture (small wrinkles or sallow complexion), the real result comes already through three-four sessions, but to remove stretch marks it is necessary more than ten sessions, and it is only for fresh stretch marks. Fight against old stretch marks with the help of a phonophoresis be inefficient, or only can give them lighter and thin look. The same applies for deep wrinkles and nasolabial folds.

For the effectiveness of the procedure, it is necessary to stimulate a bile excretion and to normalize the function of the protein and fat metabolism of liver with the use of ultrasonic massage of a projection baking or the magnetic laser applicator.

The effectiveness of ultra phonophoresis depends on the correctly picked up structure of preparations. When performing the anti-aging procedure, the greatest popularity preparations are with peptides, antioxidants (vitamin E) and amino acids. The problem of young skin is effectively solved by preparations with sulfur and zinc, the extracts of an aloe and a camomile possessing the calming and anti-inflammatory action.

Ultrasonic lifting restores a youthful skin. With the help of ultrasound is a massage of each cell, therefore, are formed collagen and elastin fibers, also the hyaluronic acid, which is responsible for moistening, density and elasticity of the skin. All these actions make the face form becomes more accurate, skin is tightened and gains elasticity.

Cosmetic preparations using ultrasonic procedure penetrate deeply into the dermis and accumulate in so-called "skin depots". These "depots" provide the accumulative and prolonged effect of lifting.

During this procedure occurs a powerful impact on capillaries, their walls are reduced, as a result of this "gymnastics" surplus of inert liquid is removed, the intertissue space is released and the lymph flow and the movement of blood is normalized, tissues are saturated with oxygen and nutrients.

Scheme of the procedure of ultrasonic lifting:

To carefully clean the skin, having executed makeup removal. Then, including a neck and a zone of a decollete to apply the cream on problem areas. Execute ultrasonic lifting massage on massage lines. It is pleasant, comfortable procedure lasting about 10 minutes. For a stable lifting effect and fixing of the received result of one session, it is not enough.

Depending on a condition of the skin, it is necessary to carry out 8-10 procedures. The effect lasts 6–8 months.

The main thing in the activity of ultrasound is its role of "conductor" of a preparation and the catalyst of biochemical reaction inside the skin.

Before the procedure on the skin are applied special cream of the directed action – moistening or lymphatic drainage, which remove excessive liquid. A special smooth fungoid nozzle, we process a face on massage lines. Achievement of the strong effect of "lifting" is provided by the influence "two in one": first-massage, secondly – action of preparation.

The procedure of ultrasonic lifting is perfectly combined with the nutritious, vitamins, moistening and rejuvenating masks which applied after the influence of ultrasound.

Depending on the grooming of skin, heredity, specific features – to someone lifting procedures are necessary in twenty-five years, and for someone at thirty-five-year. By the way, such procedures perfectly relieve swelling and eliminate a tired look during a premenstrual syndrome – when even the most attractive women are dissatisfied with their appearance.

2.4. Magnetic field

Magnetic procedures (MP) – a cosmetology method, at which the pulsing of low-frequency magnetic field influence on biological tissues, created using special solenoids or constant magnetic field with the application of permanent magnets.

Spatial heterogeneity of magnetic fields causes the formation of magnetohydrodynamic forces which cause additional fluctuations and magnetic polarization of ions in a stream in electroconductive moving environments (blood, lymph).

The mechanism of action of a magnetic field is reduced to the specific physical and chemical phenomena occurring in biological system basic of which are:

- The increasing fluidity of the liquid.
- Increase of permeability of tissue and strengthening of "capillary effect".
- Spin polarization of products of biochemical reactions.
- Increase oxygen capacity of blood.
- Increase the rate of biochemical reactions.
- Reducing the size of microclusters liquid.

When performing procedures with using of magnets it is necessary to consider that, the South Pole of a magnet has the toning action, and a North pole - sedative (calming).

The effects of magnetic fields application in cosmetology:

- anti-edematous and regenerating;
- trophic;
- vasodilating.
- increase the efficiency of lymph drainage in tissues of all organism;

- ability of magnetic fields to influence on the organism at the cellular level allows normalizing metabolic processes, to improve microcirculation in all layers of the skin, to stimulate collagen synthesis;

- influence by magnets in cosmetology leads to the elimination of cellulite nodes, to the reduction of a subcutaneous layer, increases the elasticity of skin, restores a normal tone and moisture of the skin, promotes the fastest healing of hematomas, hems, and others.

Magnetic fields used in the cellulite at any stage, aging of the skin, circulatory failure, for the correction of body shape, at hematomas (bruises), skin ulcers, keloid scars, hypostases.

The combination of magnetic influence and phototherapy has pronounced cosmetic effect because one factor strengthens the action of another.

2.5. Vacuum

The Vacuum Massage (VM) – a method of cosmetology impact on the skin of local discharge.

To procedures by the vacuum can cleaning the skin, a lymphatic drainage, liquid microcirculation improvement, and also prevention of premature aging of the skin. The vacuum facial massage has begun to practice in many beauty salons.

The technique of the procedure. The position of the patient - lying on his back.

Face muscles should be completely relaxed. We carry out makeup removal.

First, there is the preparatory stage. It can be various warming compresses including the use of medicinal herbs. Then we do the classical facial massage.

Further, carry out vacuum massage with the use of vacuum cans of small diameter.

We apply the clearing milk on face skin (if the procedure of vacuum cleaning) or massage cream, gel (if procedure – the toning vacuum massage).

Conditionally divide the face into several working zones: forehead, cheeks, nasolabial triangle, chin, neck, décolleté zone.

The vacuum nozzle is attached to a silicone hose. In vacuum nozzles, the degree of discharge is regulated by using the holes on a nozzle and the regulator on the electronic block. Perform vacuum cupping massage by a labile technique (the nozzle is moved on a face skin surface with the rectilinear or helicoid movements on massage lines or the course of lymphatic vessels to the next lymph nodes).

Time of procedure of an exposition - from several seconds to 1 minute per a zone. By the circular and helicoid movements along massage lines, the tissues on all surface of the face, nose, forehead, chin are worked out. We must do accents on problem zone (as a rule, in the area of the mandibular joint, points of a facial nerve). Techniques are repeated several times, gradually increasing the degree of rarefaction of air contained between given limits. Finish procedure with light strokings.

The remains of massage tools wash away with warm water using cotton make-up sponges.

The course of vacuum procedures includes 7-12 sessions which are held every other day. Duration of one procedure - 5-12 min.

After the termination of a course, it is desirable to hold the supporting sessions once every 7-10 days.

When carrying out vacuum massage with the aim of obtaining a cosmetic result, at average parameters of vacuum and a small exposition, as a rule, hematomas (spot) on a face do not arise.

Face skin becomes smooth, gentle, velvety and elastic. The tone of muscles raises - muscles are tightened. Disappears swelling and puffiness of the face, decreases double chin. The top layer of skin frees from dead cells, blood vessels extends, sweating increases, the activity of sebaceous glands is normalized.

Indications:

In case of violation of metabolic processes in the skin - increased activity of sebaceous glands, excessive sebum secretion, a delay of sebum in channels of sebaceous glands; dry shelled skin; flabby, wrinkled skin; puffiness of the face, existence of a double chin, decrease of a muscular tone; in case of tendency to stagnation, rosacea of the face, cicatricial changes of skin; acne rash.

Vacuum procedures of the face help also at stress, chronic overfatigue, sleeplessness.

After sessions of vacuum therapy, overall health and sleep improve, efficiency increases.

2.6. Biomechanical stimulation

Biomechanical stimulation (BMS) – a method of cosmetology influence by mechanical oscillations of low frequency and different amplitude which is carried out by the direct contact of a radiator - "vibromodule" – with the patient's tissues. There is a selective stimulation of the mechanoreceptors of the skin (Meysner's microorganisms and free nerve endings) that leads to expansion of vessels of muscular type, strengthening of local blood circulation and lymphatic drainage, activation of skin trophism and reduced muscle tone. This particularly is actual for smoothing of deep folds on a face which promote the formation of wrinkles.

BMS is a cumulative influence of mechanical pressure and the magnetic field, reciprocating oscillation “vibromodule” It is equipped with replaceable nozzles:

- smooth – for biomechanical massage;
- fine-grained – for micro polishing (polishing);
- coarse-grained – for superficial microdermabrasion.

The vibromodule allows carrying out at the same time superficial microdermabrasion and mechanical massage of skin.

Cosmetology effects:

- deep relaxation of face muscles (neck, decollete zone);
- improvement of mobility and elasticity of skin;
- clarification of skin from horn scales and comedones;
- increase of skin turgor (a tonicization of the withering skin);
- decrease in a muscular tone and as a result – smoothing of deep folds, reduction of wrinkles (on a forehead, upper lip, a neck);
- lifting of a face form (correction of a double chin, "bulldog's" cheeks).

Table. 2. Resonant frequencies applied in cosmetology

Indication for use	Frequency modulation, Gc
Abscess	1,7; 86
Allergic dermatitis	0,7; 1,7; 2,6; 9,2; 9,4
Appetite, regulation	25; 35; 94
Bruising, bleeding	62; 67; 83; 96
Fungal disease	37; 53; 99
Fatty tissue, fat	2
Fatty tissue, dissolution	34
Fatty tissue, obesity	4; 4,9; 32; 35
Protective forces, strengthening	11; 19; 26; 58; 60;79; 84; 97
Immune system	1,7; 1,8; 8,1; 9,4; 9,6
Itching	9,4; 40; 72
Skin	0,7; 1,7; 2,2; 9,4; 85
Skin (degenerative changes)	97
Oily skin	52; 85; 87; 90; 98
Skin, acne vulgar	1,7
Skin, white spots	11; 19; 26; 58; 69; 79; 86; 97
Skin, red spots	23; 88
Skin, cell renewal	69
Skin, ороговелости	18
Skin, formation of pigmentary spots	53
Skin, spots purulent	77
Skin, irritation of face skin	89
Skin, regulation of barrier function	1,6; 1,7; 9,4
Skin, dry	52
Skin, acne	53; 62; 75; 86; 90; 93; 98
Skin, furunculosis	1,7; 3,3; 4,9; 9,2
Skin, dry eczema	0,7; 1,7; 2,5; 9,4
Skin rash	4,9
Burn the sun	72
Swelling	6,3
Wound, slow healing	20; 40; 99

Scars, healing	18; 28
Postoperative scar	93
Contusions, bruises	2,5; 9,1
Furuncle	1
Erythema	9,4

Practical recommendations:

1. At the selection of hardware methods of influence, it is necessary to consider contraindications to their application.
2. During the work of hardware techniques, the overall time of impact on a body should not exceed 30 min.
3. Implementation of programs on the face and body is not recommended simultaneous (in one day).

Table 3. Compatibility of physical factors

Name of a method	Light	EC	US	Magnet	BMS
Light	*	+	+	+	+
Electric current (EC)	+	*	-	+	+
Ultrasound (US)	+	-	*	+	-
Magnet (M)	+	+	+	*	+
Vacuum (V)	+	+	+	+	*
Biomechanical stimulation (BMS)	+	+	+	+	+

On the crossing of the name of procedures, the sign "+" designates compatibility of procedures, "-" - the procedures, which not recommended in one session.

CHAPTER 3. PRACTICAL ADVICE ON THE APPLICATION OF HARDWARE METHODS IN COSMETOLOGY

3.1. Lymphatic drainage

Lymphatic drainage - is the main procedure in the comprehensive program for face care.

The lymphatic drainage is a removal of "excess" liquid from intracellular space with the help of various techniques. In our cells (including cells of skin) there is water, and the cells themselves are floating in intercellular space from where they receive the nutrients which coming from blood. Lymph, washing tissues, collects and deletes cells waste products. They are displayed using special drainage system - lymphatic system.

The tone of lymphatic and blood vessels decreases over time, the liquid starts to be late in the intracellular space. The formed toxic substances are blocked together with liquid. From there are hypostases which develop with age, bags under eyes. Such hypostases on a face were particularly visible; they make a face bloated and ugly.

The liquid which is contained in the blood (plasma) passes through the walls of capillaries and gets into tissues. Now it is interstitial fluid. It seeps into intercellular spaces, feeds cells and takes away toxic products of their activity. The part of interstitial liquid gathers by veins, the rest,

is removed by lymphatic vessels. The interstitial liquid which has got to lymphatic vessels is called lymph.

In a healthy organism, there is a balance between the speed of a lymph formation and speed of outflow of lymph.

Therefore, apply wrappings and the special drainage massage, which increases pressure in tissues.

Ways of carrying out lymphatic drainage.

Under the current factor, methods of carrying out a lymphatic drainage can be divided into the following groups:

Medicamentous: the local vascular preparations are improving a tone of veins, expanding capillaries.

Hardware: mio- and electroneurostimulation; magnetolaser influence, ultrasonic, vibration (biomechanical), pneumo and vacuum massage.

Manual: lymphatic drainage massage.

Technique of lymphatic drainage.

The procedure begins with cleaning of the skin with alkaline solutions. At the second stage carry out magneto laser impact on face skin within 2-3 minutes on one zone. Then perform a light massage of the lymph nodes, which located nearby of an influence zone, with using of massage oils with the addition of vasodilating preparations.

The main procedure can be carried out using manual or hardware methods of influence (muscle toning and electro neurostimulation; magneto laser influence, ultrasonic, vibration (biomechanical), pneumo or vacuum massage).

The movements must be such as continuous wave from the periphery to lymph nodes which is "wringing out" a lymph from tissues. As lymphatic vessels are supplied with valves, liquid on them moves under the pressure only in one direction, from the periphery to lymph nodes.

During the procedure are carried out drainage "stroking", due to it tissues are exempted from excess liquid and the metabolism products which are contained in it. Also, there is a venous drainage – improvement of the movement of blood in the venous system. Respectively, from the problem zones are left the excess liquid and toxic substances, and, therefore, in them, normal activity is restored.

The tissues which are purified of disintegration products become more sensitive to other procedures.

Duration of procedure of a lymphatic drainage of the face for 3-5 minutes on one area.

The general course makes 5-15 procedures which are carried out daily or every other day.

In the modern literature of hardware cosmetology, the main attention is paid to the investigation of the mechanism of action of natural factors, their parameters, compatibility and various aspects of a problem.

No doubt about the importance of these issues, however out of due consideration of researchers there is a choice of zones procedure, specificity of the answer at stimulation of this or that site, adequacy of parameters and the factor in a procedure area.

One of the simplest and enough effective ways of the choice areas in cosmetology – impact directly on the problem place.

Such approach is widely used in cosmetology, but it doesn't consider pathogenetic mechanisms of development of a problem, and also doesn't give the chance to influence more efficiently the course of the pathological process.

For example, in the pathogenesis of emergence of pigmentary spots on the face and bodies the liver has significant influence (hepatobiliary system) and its segmentary innervation which is the reason of emergence of these spots. Impact on the segmentary formation and sick body more efficiently, than impact only on pathological center. This principle of the choice of zones in practice of physical therapy, and further in esthetic medicine has received the name of metamere measured or segmentary (metamere-segmentary)

The high performance of a machine cosmetology allows to apply widely physical factors in comprehensive programs on face care, especially in case of emergence of age changes or esthetic problems.

Application of physical factors in therapeutic doses do not cause, as a rule, toxicity, allergic reactions, has no side effects and provides preservation of cosmetology effect for a long time. However, in a physiotherapy and machine cosmetology, there are restrictions on the application of physical factors.

Absolute contraindications:

- oncology;
- acute diseases of the skin (for example, dermatosis);
- cardiovascular diseases (the idiopathic hypertensive above 2 stage)
- sharp clinical course of an acne;
- the early rehabilitation period, after a face operation;
- condition after a chemical peeling;
- fatty hernias of top and bottom eyelids;
- any damages of face integument
- herpes.

Relative contraindications:

- expanded hypodermic capillary network;
- multiple teleangiectasias.

3.2. Vacuum facial massage

Execution of vacuum massage most efficiently for:

- improvements lymph flow;
- improvements of blood flow and vascularity in a zone of procedure execution;
- improvements of a turgor and tone of skin;
- muscle relaxation, restitution of forces after heavy exercise or mental stress;
- rendering antidepressive and antistress action.

No other part of a human body is exposed to adverse factors impact of the environment, as the face, which is always open for winds, frosts, sunshine. The stress also leaves very noticeable traces on a face.

Wrinkles, deep mimic folds, flabby skin, a decrease in a tone of muscles - all this gives out, unfortunately, our age. The right care has significant value for a condition of the skin.

However, much more important is the healthy and balanced diet, which is the best way of delivery to an organism all necessary elements, needed for a full-fledged metabolism. This approach is more effective, than attempt "to feed" skin with vitamins by means of creams and the other vitaminized cosmetics. Moreover, it is still crucial, that skin acquired nutrients. So in such way, that in the weak facial tissues there was a full-fledged metabolism.

The condition of facial tissues reflects the functional state of all bodies and systems of an organism and first of all depends on processes, which happen in a hypodermic fatty tissue, neuromuscular structures, capillaries of vascular and lymphatic networks.

Some pathological processes which occur in the delicate facial tissues, are bound to a violation of an innervation of a mimic and chewing musculature, and also to a violation of tissues trophism.

Treatment of these diseases, and also prevention of premature withering of face skin quite in the power of vacuum therapies. Vacuum massage of the front part of the head started practicing in some beauty shops recently.

Now about spots. When carrying out vacuum massage for the purpose of receiving cosmetic results, at normal parameters of vacuum and a small exposition, as a rule, spots on a face do not arise. Face skin becomes smooth, gentle, velvety and elastic. The tone of muscles raises - muscles are tightened. Puffiness and inflate of the face disappears, the double chin decreases. The high layer of skin frees from the died-off cages, blood vessels extend, diaphoresis increases, the activity of sebaceous glands is normalized.

Indications:

In case of violation of exchange processes in the skin - the reinforced activity of sebaceous glands, excess fat secretion, delay of skin fat in channels of sebaceous glands; in case of the dry shelled skin; flabby, wrinkled skin; puffiness of the person, existence of a double chin, decrease of a muscle tone; tendencies to developments of stagnation, an erythema of face, cicatricial changes of skin; acne rash.

Face vacuum therapy also helps in case of stress, chronic overwork, neuritis and neuralgia of trigeminal and facial nerves, migraine, sleeplessness.

After sessions of vacuum therapy, overall health and sleep improve, efficiency increases.

Contraindications:

Inflammatory phenomena, pustular damages of skin, heavy pathologies of the cardiovascular system, some diseases of nervous system.

Vacuum massage effects:

- opens ostioles;
- partially deletes comedos and toxins;

- improves blood flow and vascularity in a procedure execution zone;
- the reflex irritation of skin promotes preparation it to the perception of the subsequent cosmetology procedures.

3.3. Microcurrent procedures

Effects of microcurrent procedures:

Restitution of the defective integuments.

Microcurrent therapy positively influences on reparative processes in skin and it explains its active application in cosmetology.

Pathological processes in any tissue (in the skin including) begin with damage of cages. The arachidonic acid is entering into phospholipid fraction of cellular membranes and getting to intercellular space, starts inflammatory reaction with all obvious results.

For the most efficient restitution of the defective tissue, it is necessary to intensify intracellular metabolic processes, (to provide cages with feeding and to delete "slags" in time), microcurrent electrostimulation possesses such complex action.

Stimulation of cellular metabolism processes.

Researches showed that as a result of microcurrents procedure, synthesis of ATP increases for 500% (i.e. in 5 times), and transport of amino acids - for 30-40%.

One of the explanations for such phenomenon is considered the following now. It is known that on the unimpaired cellular membrane there is a potential difference from the outer side in norm "-", with internal "+".

Maintaining of a membrane potential is necessary for normal operation of ionic channels, which are very sensitive to any its change. In case of microcurrents impact, the potential on membrane changes, some ionic channels open, and ions, start coming to a cage through a concentration gradient, including Calcium which is the regulator of many enzymes.

That is why the increase in its intracellular concentration serves as a signal for the start of some processes, in particular, of ATP synthesis – the universal cellular "battery" without the energy of which, passing of further metabolic reactions is simply impossible. Thus, the following line-up of events is built: action of microcurrents - change of membranous potential of cages - opening of ionic channels, including, calcium, (calcium starts arriving in a cage through a concentration gradient) - increase in intracellular concentration of calcium - activation of Ca- dependent enzymes - increase in ATP synthesis (energy appear, necessary for further intracellular metabolic processes) - a synthesis of proteins, lipids, DNA and other molecules, necessary for a cage, - acceleration of a differentiation of cages and regeneration of tissue.

Restitution of microcirculation and lymphatic drainage.

Tissue inflammation usually is followed by local hypostasis, which causes microcirculation violation. As a result, cage does not receive an adequate feeding, and in intercellular space slags collect. In this situation normalization of processes of "inflow" and "outflows" is a necessary condition for faster adhesion and restitution of the defective site. The classical method for improvement of blood circulation and a lymphatic drainage is massage. However, if there is a serious damage of an integument (for example, after a surgical intervention), massage is prohibited.

Microcurrent therapy in such cases is, a nearly only way of efficient fight against hypostasis. Stimulating muscle fibers to a serial tightening and relaxation, microcurrents render so-called "effect of a pump" - at compression vascular and lymphatic capillaries between muscle fibers are closing and liquid jumps out of them, at relaxation, on the contrary, the gleam of capillaries opens and they are again filling. It should be noted that the microcurrent lymphatic drainage has the long-lived after-action (till 24 hours).

Microcurrents also can effect on a smooth musculation of arterioles, changing a tone of a vascular wall. Thus, thanks to microcurrent stimulation microcirculation improve, hypostasis resolves quicker, cages start being normally supplied with nutrients and as the result, occurs the faster adhesion.

Combined use of microcurrents and photostimulation

The combined application of microcurrents and photostimulation has strong therapeutic and cosmetology effect, supplementing and strengthening each other:

- microcurrents normalize operation of ionic channels of a membrane of cages, grease and sweat glands, increase excitability of the nervous terminations, and as a result, the skin turgor improves (biochemical reactions in skin proceed by electrochemical type);
- in case of application of light (red, blue, green) there is an exaltation of organic compounds molecules occurred, which located in the skin, that causes activation of metabolic processes, increase in synthesis of enzymes cages, that provides production of power stocks. Because of the same mechanisms, tissues of an organism absorb a larger amount of oxygen. Biochemical processes are activated, the amount of the energy spent by an organism for chemical reactions decreases, the activity of organic compounds in skin increases (biochemical reactions in skin proceed by photochemical type).
- Red light – renders tonic effect, strengthens vessels, increases the oxygen capacity of blood, activate blood flow and vascularity, increases the effectiveness of biologically active materials transport in skin.

Blue light – renders a sedation effect, removes a hypersensitivity and irritation, normalizes work of sweat glands, promotes activation of P450 cytochrome which participates in deintoxication of skin.

Green light – renders the harmonizing effect, promotes the acceleration of exchange processes, regeneration of cells in the skin.

The photostimulation can be used as monotherapy, and also in combination with microcurrents or other types cosmetology procedures.

Indications:

- hypostases and pastosity of face skin;
- age dryness;
- withering of skin;
- aliphatic skin;
- vulgar and pink acnes;
- pigmentations and seams;
- restitution after plastic surgeries.

Contraindications:

- pregnancy;
- individual intolerance of electric current;
- violations of a rhythm and conduction of a cardiac muscle (ischemic heart disease);
- the simulated cardiac pacemaker;
- the existence of metal designs and pins in bones;
- gold threads;
- malignant tumors;
- chemical peeling.

ANODE (+) positive polarity:

- Allows to lower the raised tone of mimic muscles and to smooth wrinkles;
- Reduces irritation of skin;
- Fights against rosacea and teleangiectasias;
- Stops allergic reactions;
- Excrete toxins;
- Promotes defecation of skin.

CATHODE (-) negative polarity:

- Normalizes activity of sebaceous glands;
- Decontaminates skin;
- Raises a tone of skin and muscles;
- Has a lifting effect.

Photoactivation effects:

- activation of biochemical processes of skin under the influence of light;
- red (an increase of a muscle tone, an increase in production of collagen),
- blue (deintoxication),
- green (regeneration).

Microcurrent therapy is a method of procedure by impulses of squared electric current and small amplitude (to 1000 microamperes - a mcA) on skin sites with the medical, preventive or esthetic purpose.

Microcurrents imitate the operating impulses of operation of ionic channels of a cage membrane. Thus, influence is carried out at three levels:

- micro level – perform normalization of ionic balance inside and out of the cellular environment of a cage;
- macro level – form the mode of the ionic pump, for ensuring normalization of liquid balance;
- electrolysis level – acceleration of biochemical reactions passing.

Microcurrents softly influence on the epidermis, corium, hypodermic fat, vessels, muscles, restore the ionic balance of a cage, stimulate deduction of large coarse-dispersion proteins, amino acids, lipids, removal of metabolic products due to the weak lymphatic drainage action. Microcurrents have anti-inflammatory, disintoxication effect, normalize work of sebaceous glands of the skin, that is crucial in case of aliphatic skin and seborrhea.

Microcurrents cause the weak tonic impact on a mimic musculation of the face (a hardware myolifting of face skin), create conditions for synthesis new collagenic and elastin fibers, which deficiency becomes more notable with age, prophylaxes crawl promote.

3.4. Miostimulation

Electrostimulation of the facial muscles-apparatus impact on facial muscles with the help the of the myotonic currents with a particular form, which providing restoration of a tonus of muscular tissue, lifting and improvement of a turgor of the skin, microcirculation of lymph and blood, a lipolysis of adipose tissue (fig. 1).

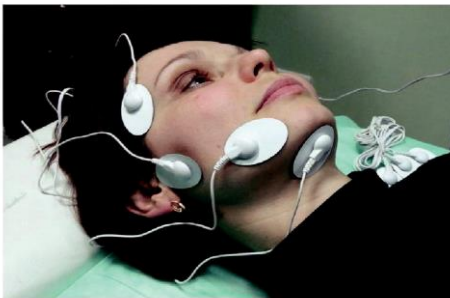


Fig. 1. Procedure of face muscle toning

In the process of muscle toning worked facial muscles, necks and zones of a decollete, which it is rather difficult to train with the help of physical exercises.

Procedure of the face muscle toning

As a result of proceedings of a muscle toning occurs muscles training, oxidation-reduction processes in tissues are improved, hypermotility of mimic muscles is eliminated. Additionally, signs of fatigue of a skin and a ptosis of tissues are removed, reduces swelling, the process of formation of new folds is slowed down, happens a correction of a face form and rejuvenating effect.

Indications for use of face muscle toning:

- age and other changes of a skin and face muscles, necks and zones of a decollete;
- lowered eyebrows, transversal wrinkles of a forehead, wrinkles between brows;
- violation of a skin turgor and muscles around eyes ("goose pads", a ptosis a century);
- change of a face form, ptosis and sagging of malar muscles, including "bulldog's cheeks";
- flabbiness of a skin and muscles of the cheeks, muscles raising an upper lip, mimic folds, folds around a mouth;
- second chin.

Effects from carrying out procedures of a muscle toning:

- improvement of a tone and normalization of skin and face muscles, neck and "decollete" zone;
- smoothing of mimic wrinkles, large wrinkles become less deep;
- lymphatic drainage and detoxicating of skin and face muscles, neck and "decollete" zone;
- improvement of a turgor of skin and muscles round eyes (decrease of manifestations of "goose pads" effect, raising of eyelids);
- restitution of a face form, normalization of a condition of malar muscles;
- improvement of a tone of skin and muscles of the cheeks, muscles raising an upper lip, decrease of mimic wrinkles and wrinkles round a mouth;
- stimulation of production of characteristic collagen, synthesis of protein and nucleic acids;
- improvement of microcirculation of lymph and blood, increase the level of insulin and endorphins.

3.5. General recommendations

Age changes are tough processes which proceed in each cell of an organism, and a condition of the skin is only a consequence of manifestations of this process on a face, and both the cosmetologist and his client need to remember it.

On skin aging influenced by a set of factors, basic of which it is possible to divide into two groups:

- internal (heredity, stresses, violations of immune and hormonal systems, violation of hydration and microcirculation of liquid, food and innervation of skin, chronic diseases of internals);
- External (UV radiation, an environmental contaminants, allergens, mechanical damages, smoking, irrational food).

Today is considered the accepted free radical theory of Harman and the theory of glycation of Meylard.

The free radical theory explains processes of age changes with the excess formation of free radicals and their influence on metabolism processes of cells.

Free radicals are called the molecules having free valency and therefore seeking to use it, having entered chemical reaction. There are various reasons for the emergence of free radicals, but irrespective of it, they damage the genetic device of a cell, causing the harm to an organism. However, if the problem were so simple, would be to accept enough only substances-antioxidants, which are an influence on radicals, and the process of age changes would be stopped. However, unfortunately, everything is much more challenging, as free radicals only take part in the complex process of aging of an organism. In this case, there is a violation of the function of respiration (an aerobic metabolism),

microcirculation and food, and the most important are disturbed neuroprotect, neuro conductivity is broken and as a result of it is reduced innervation of the skin.

Another important mechanism of the process of age changes – the non-enzymatic reaction between monosaccharides and an amino group of proteins called a glycation. Its essence consists in the ability of proteins to contact with glucose. The speed of these reactions depends on the concentration of components and time of reaction. That is, if the better there is a liquid microcirculation, the more, then the slowly there is this process. In turn, free radicals, influencing on cells proteins, do them by more defenseless before glucose influence.

Today proved the involvement of glucose in violation of operation of potassium-sodium ionic pumps of a membrane of a cell and development of some diseases, such as atherosclerosis, glaucoma.

The aging processes affecting the entire body, are reflected in the skin in the most deplorable way: age changes proceed in all its layers. The amount of water in epidermis decreases that leads to a peeling, violation of a keratinization and desquamation of the epithelium. As a result of it, epidermis becomes thinner, the network of small wrinkles is formed, skin becomes wrinkled, pigmentary spots appear. In the basal layer of epidermis the cellular mitosis and differentiation of new cells, that is, in turn, leads to delay of advance of keratinocytes to a skin surface. All this leads to decrease the rate of updating of epidermis and weakening of barrier function of the skin.

In the dermis occur decrease of the activity of fibroblasts and their damage. Fibroblasts are the most numerous group of cells which synthesize fibrillary proteins (collagen and elastin) and glycosaminoglycans with their subsequent allocation in intercellular space. Formation of the main substance and fibers, healing of wounds, development of scar tissue, are connected with the activity of fibroblast. During the aging and damage of fibroblast, the synthesis of collagen and elastin, and also glycosaminoglycans is slowed down, but proteolytic enzymes are produced – metalloproteases. In the dermis, two processes have parallel proceed: synthesis and destruction of collagen. However, under the influence of some factors, in particular,

hyperproduction of proteolytic enzymes, collagen dimeasures – so-called collagenic "stitchings" are formed. Such collagen cannot be processed by enzyme a collagenase for the subsequent synthesis and accumulates in the dermis.

Thus, in the skin with age the following processes occur:

- excessive lipid peroxidation of cell membranes caused by free radicals;
- strengthening of processes of glycation;
- delay of mitotic cell fission and their differentiation;
- delay of the speed of advance of new cages to a skin surface;
- thinning of a granular layer and thickening of a horn layer of epidermis;
- delay and violation of functions of fibroblasts;
- disruption of the dermal and cutaneous barrier of the skin;
- the violation of the synthesis and degradation of collagen and elastin;
- delay of peeling of an epithelium of the stratum corneum;
- increased transepidermal water loss

The cosmetologist is faced by a problem of improvement of a condition of skin due to the application of various cosmetology procedures and optimization of the use of cosmetics.

An essential condition for preserving an attractive appearance of the skin is maintaining optimum water balance in tissues and restoring the moisture level in a horn layer.

At the skin, water is present in a cell and at intercellular space.

The normal water balance of skin is supported by two processes:

- diffusion of water into the dermis through walls of vessels;
- evaporation through the epidermis (water, having passed through the epidermis, it is allocated from a skin surface).

Adverse external conditions, misuse of cosmetics, psychosomatic condition of the patient, reception of some medicines and skin diseases can influence these processes.

Lipids (the fat-like substance derivative of fatty acids, alcohols or aldehydes, insoluble in water which is contained in living cells and can be extracted from them) carry out a major biological role in an organism and therefore fats and oils are applied in cosmetics.

The intercellular space between corneocytes – cells of a horn layer of epidermis – is filled with lipids which stick together them among themselves, and also are part of cell membranes.

Lipidic structures of a stratum corneum interfere with the evaporation of water from an organism and carry out barrier function of skin, and the lack of linoleic acid leads to their destruction.

Linoleic acid belongs to essential fatty acids; it means, that the organism cannot synthesize it and must get from food. At a lack of linoleic acid changed the appearance of skin: develops hyperkeratosis, appear a dryness and a peeling, there is a violation of a skin barrier and cellular differentiation. Can create the impression that deficiency of linoleic acid is reflected only in dry skin, and for oily skin can be useful. However, unfortunately, for oily skin it also pernicious. At a lack of linoleic acid on its place in cellular membranes can be incorporated oleic, that leads to some pathological changes, in particular, to a violation of transport of substances in the cell. As a result, it leads to violation of local immunity and exchange processes in the skin, and as a result – to deterioration of its appearance.

Factors which can lead to destruction of lipidic structures:

- lipid peroxidation;
- the direct impact of aggressive chemicals on the skin;
- violation of lipidic synthesis or changes of a ratio of the main classes of lipids of the epidermis.

The young healthy skin has the balanced amount of water and fat. Normal the horn layer of skin approximately consists of 20% water. If the amount of moisture decreases to 10%, skin becomes dry and coarse. For water deduction, skin excretes particular substances which have received the general name "natural moistening factor".

Approximate structure of the natural moistening factor (%): free amino acids – 40; acid pyrrolidine carbonyl – 12; urea – 7; uric acid, glucosamine, creatinine – 1,5; sodium, calcium, potassium – 1, phosphates – 0.5; chlorides – 6; lactates – 12; nitrates, formate – 0,5; fractions structure of which isn't established – 9,5.

Earlier, there was a point of view, that sweat and sebaceous glands are responsible for moistening, and at dry skin, they are insufficiently

active. Oddly enough, oily skin also can be dehydrated, and dry skin at regular drawing on it oily creams does not become normal.

Humidity of the skin depends on from:

- the natural moistening factor;
- epidermal lipids;
- to some extent, from sebum, which together with perspiration forms the he water-lipid mantle which interfering water evaporation.

The main reason for the decrease hydration of the skin is connected with the state of the dermis, but not the stratum corneum. In the dermis regulation of hydration is carried out by ceramides, mucopolysaccharides and hyaluronic acid, 1 g of which is capable of holding about 300 ml of water.

3.6. Symptoms of age-related changes in the face

The reasons for age changes are lied in our genes, with age durability of the ligaments holding skin decreases, ligaments are stretched and under the influence of attraction of the force all soft tissues fall. These changes lead to the formation of the surplus of skin. On the face appears typical wrinkles and folds (fig. 2).

Skin is also exposed to characteristic changes — the elasticity and collagen fibers with age become less. Their atrophy is the natural change which is partially determined by heredity.

However, this process is not purely hereditary: meet him and other factors. The most dangerous are the sun. Too much time exposure to the sun causes characteristic degeneration of the skin-called elastosis — elastic fibers break down and thicken and the regular skin structure is changing. The sun has a direct influence on the epidermis, thickening the stratum corneum, causing discoloration and damaging the cells. Aging is not limited to sagging of the soft tissues and changes in the skin. The subcutaneous layer of fat in the malar area becomes thinner, and the neck increases a person alter their usual volume.

Symptoms of age-related change seen primarily on the face.

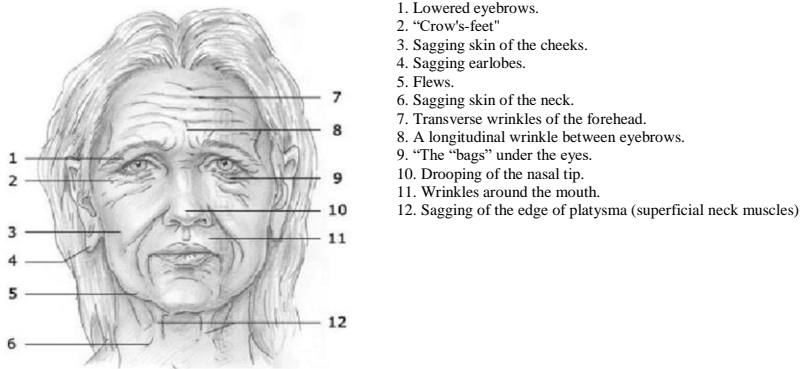


Fig. 2. Age-related changes of the face

Considering the complexity of age changes to process , fight against it should be carried out constantly (and not only in a cosmetology office). It is, first of all, a healthy lifestyle (a normal dream, a balanced diet, physical activity, protection from UV rays), and also the optimum use of the hardware methods of care the skin, which influencing on biochemical processes of skin, and cosmetics.

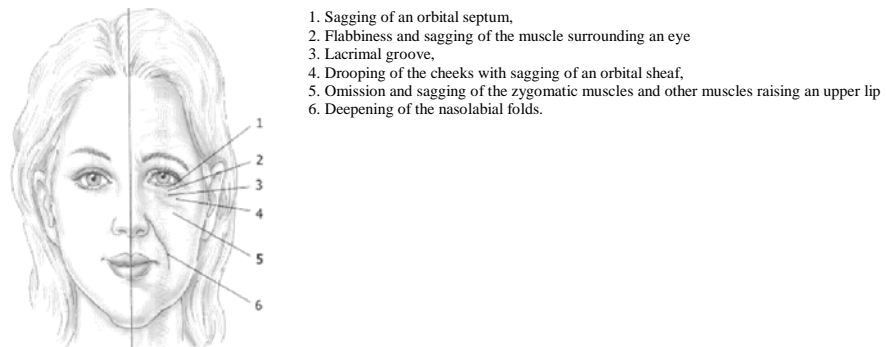


Fig. 3. Age-related changes of the face

CHAPTER 4. THE DEVICES FOR CARRYING OUT COSMETIC PROCEDURES FOR FACE CARE RELEASED BY LLC «NMC «MEDINTECH»

4.1. Vacuum massager MBT-01



Fig. 4. Device MBT-01

The vacuum massager "MBT-01" (fig. 10) is intended for performance of vacuum massage due to the formation of local discharge in special nozzles.

Effects of procedure of vacuum massage: increased blood and a lymph circulation, metabolic and trophic processes in skin and hypodermic cellulose and muscles.

Technical characteristics:

The created discharge in a nozzle - 0,8 A.D. Quantity of massage nozzles - 10 pieces.

The masseur works from the alternating current with the frequency of 50 Hz and a voltage of 220 V.

Use of the device is the most effective for:

- Cleaning and deintoxication of skin, restoration of skin breath;
- Performance of a lymphatic drainage;
- Improvements of blood supply in a zone of carrying out procedure;
- Improve elasticity and skin tone;
- Provide antidepressant and anti-stress action.

The technique of the procedure.

The position of the patient - lying on back or semi-sitting in a chair with the head which is cast away back. Face muscles have to be completely relaxed. We carry out makeup removal.

The first step is the preparatory stage. It can be various warming compresses including with the use of medicinal herbs. Then is the classical facial massage.

Execute a light massage of a zone of venous outflow of the blood from the head.

Next, carry out vacuum massage with the use of vacuum cans of small caliber.

We apply the clearing milk on face skin (if the procedure of vacuum cleaning) or massage cream, gel (if procedure - the toning vacuum massage).

Conditionally we divide the face into several working zones: forehead, cheeks, nasolabial triangle, chin, neck, décolleté zone.

The vacuum nozzle is attached to a silicone hose. In vacuum nozzles extent of discharge is regulated by using the holes on a nozzle and the regulator on the electronic block. We carry out vacuum cupping massage of the face by a labile technique of procedure (move on a face skin surface with the rectilinear or helicoid movements on massage

lines along the lymphatic vessels to the next lymph nodes or from center to the periphery.)

Time of procedure of an exposition - from several seconds to 1 minute per a zone. The circular and helicoid movements on massage lines working out the tissues on all surface of the face, nose, forehead, chin. We must do accents on problem zone (as a rule, in the area of the mandibular joint, points of a facial nerve). Techniques are repeated several times, gradually increasing the degree of rarefaction of air contained between given limits. Finish procedure with light strokings.

The course of vacuum procedures includes 7-12 sessions which are held every other day. Duration of one procedure - 5-12 min.

After the termination of a course, it is desirable to hold the supporting sessions once every 7-10 days.

4.2. Cosmetological combine "МИТ - 11"

The purpose of the device.

Device for facial care МИТ-11 (model COSMO) (Fig. 4) pre-assigned for:

- ultrasonic peeling,
- phonophoresis,
- magnetorotational, superficial microdermabrasion, polishing,
- vibratory.

The device is recommended for use in cosmetic prices-Bang, showrooms and offices.



Fig. 4. Device МИТ-11 (model COSMO)

In devices the highly efficient operating modes developed and approved by our experts by application of low-frequency ultrasound, magnetolaser and biomechanical stimulation are realized.

Table 4. Recommended operating modes

№	Name of the mode	Frequency, Hz	Time, min	Ultra-sound amplitude, micron	Level, BMS and MLT
P1	Peeling for dry, withering and sensitive skin	50-70	5	4	12
P2	Peeling for fat type of skin	70-80	6	5	15
P3	Peeling for the problem skin	70-90	7	4	15
P4	Phoresis for dry, withering and sensitive skin	2,5-52	5	2	12
P5	Phoresis for fat type of skin	52-77	5	2	15
P6	Phoresis for problem skin	1-10	4	2	15
P7	Treatment of cellulitis	32-37	15	5	15
P8	Lymphatic drainage	25-28	10	2	6
P9	Skin regeneration	1,6-1,8	6	2	6

4.3. The description of operating modes of the device in programs for face care

MODE P1 Peeling for the dry, withering and sensitive skin

Indications – the age, withering sensitive skin, a decrease in turgor and elasticity of skin; the polluted, dehydrated or flabby skin, hyperkeratosis, superficial mimic wrinkles, post-traumatic and post-operational hems.

	Name of mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level pf MLT, mt
P1	Peeling for dry, withering and sensitive skin	50-70	5	4	12

Execute makeup removal.

Apply the clearing milk for sensitive skin on a performance procedure zone (a face, a neck)

For the performance of ultrasound-peeling using a key on ultrasound-radiator, we fix a ridge nozzle of a small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a medulla zone
Red ML-inductor	On a breast, (intermmillar area)

Establish the programmed MODE P1.

Carry out ultrasound-peeling.

After carrying out procedure wash away cosmetic remains by warm water or tonic, in case of sensitive skin get wet with a napkin.

MODE P2 Peeling for fat type of skin

Indications: clarification of skin from horn scales, waste products grease and sweat glands, removal of comedones, acne (acne rash), hypersecretion, stagnant spots, post-cicatricial changes.

P6	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Peeling for oily type of the skin	70-80	6	5	15

Execute makeup removal.

Apply a scrub or the clearing milk, fat skin gel on a performance procedure zone (a face, a neck).

For the performance of ultrasound-peeling using a key on ultrasound-radiator we fix a ridge nozzle of a small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a pancreas projection.
Red ML-inductor	On a projection of the lower share of liver.

Establish the programmed MODE P2.

Carry out the procedure of ultrasound-peeling.

After carrying out procedure wash away cosmetic remains by warm water or tonic.

MODE P3 Peeling for the problem skin

Indications: youthful eels with stagnant spots and cicatricial changes, hyperpigmentation, erythema nodal.

	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
P3	Peeling for the problem skin	70-80	5	5	15

Execute makeup removal.

Apply a scrub or the clearing milk for problem skin on a performance procedure zone (a face, a neck).

Within 1-2 minute, execute massage of cervical and ear lymph nodes.

For the performance of ultrasound-peeling using a key on ultrasound-radiator we fix a ridge nozzle of a small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a projection of a sigmoid colon (at the left, in the bottom of a stomach)
Red ML-inductor	On a projection of the lower share of liver.

Establish the programmed MODE P3.

Carry out the procedure of ultrasound-peeling.

After carrying out procedure wash away cosmetic remains by warm water or tonic.

MODE P4 Phoresis for dry, withering and sensitive skin

	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude,	Level of MLT, mT
P4	Phoresis for dry, withering and sensitive skin	2,5-52	5	2	12

Execute makeup removal.

Apply the nutritious on a performance procedure zone (a face, a neck) or the moistening mask, cream or serum a preparation.

Apply nutritious cream on a zone round eyes.

For performance ultrasound-phoresis using a key on ultrasound-radiator fix a fungoid nozzle of small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a medulla zone
Red ML-inductor	On a breast, (intermamillar area)

Establish the programmed MODE P4.

Carry out procedure of ultrasound-phoresis

After carrying out procedure wash away the remains of preparation by warm water or get wet with a napkin.

MODE P5 Phoresis for fat type of skin

P5	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Phoresis for oily type of the skin	52-77	5	2	15

1. Execute makeup removal.

2. Apply a serum or an ampullaceous preparation on an influence zone (a face, a neck).

3. Apply the nutritious (moisturizing) cream on a zone round eyes.

4. For performance ultrasound-phoresis using a key on ultrasound-radiator fix a fungoid nozzle of small diameter

5. By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a pancreas projection
Red ML-inductor	On a projection of the lower share of liver

Establish the programmed MODE P5

Carry out the procedure of ultrasound-phoresis.

After procedure do not wash away the remains of preparation.

MODE P6 Ultrasonic-phoresis for problem skin

P6	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Phoresis for problem skin	1-10	4	2	15

Execute makeup removal.

Apply a medical preparation on a zone of the performance of procedure.

Apply the nutritious or moisturizing cream on a zone round eyes.

For performance ultrasound-phoresis using a key on ultrasound-radiator fix a fungoid nozzle of small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML- inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a projection of a sigmoid colon (at the left, in the bottom of a stomach)
Red ML-inductor	On a projection of the lower share of a liver

Establish the programmed MODE P6.

Carry out the procedure of ultrasound-phoresis.

Carry out the procedure of ultrasound-phoresis.

Mode P7 Decrease of cellulite

P7	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Treatment of cellulitis	32-37	15	5	15

Clear skin using a scrub.

Carry out vacuum lymphatic drainage massage (improves blood circulation, strengthens a lymphatic, opens a pores).

Carry out the “wrapping” procedure (mud, algal, clay, cold, hot). For strengthening of effect, simultaneous massage of the processed zones is recommended by an electrobiomasseur.

Wash away “applications” using a hydrolaser vacuum shower (water clears, the vacuum opens a pore, laser radiation stimulates exchange processes at the level membrane-cellular structures).

Apply anti-cellulite cream.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

Blue ML-inductor	On a projection of the lower share of a liver
Red ML-inductor	On a breast (intermamillar area)

The magnetophoto radiation stimulates a biliary excretion and normalizes the function of a fatty and proteinaceous exchange; stimulates immunity has an anti-inflammatory effect.

For performance ultrasound-phoresis using a key on ultrasound-radiator fix a fungoid nozzle of small diameter.

Establish the programmed MODE P7 other frequencies recommended by us:

Recommended frequencies, Hz	4,9; 20; 32; 34; 46; 62
Ultrasound amplitude, micron	4-5
Induction, mT	12-15
Time of procedure of ultrasound for a zone, min	3-4
Ultrasound-phoresis of body procedure time, min	to 30
MMT procedure time, min	20-30

Carry out phonophoresis. If the preparation is quickly absorbed, it is recommended to use massage oil for comfortable movement of a radiator.

Apply anti-cellulite gel.

For strengthening procedure effect recommend clients to accept vitamins A and E, broth of a dogrose or singlet-oxygen mix.

MODE P8 Lymphatic drainage

P8	Name of the node	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Lymphatic drainage	25-28	10	2	6

Execute makeup removal.

Apply lymphatic drainage on a performance procedure zone (a face, a neck).

Apply cream on a zone round eyes.

For the performance of lymphatic drainage procedure using a key on ultrasound-radiator fix a fungoid nozzle of small diameter.

By the «OII/BM» button it is established on the «W» panel for invoking ML-inductors. ML-inductors are imposed contactly on the client's body, light down:

MMT	Fat type of skin	Youthful eels with the stagnant spots and post cicatricial changes	Withering, sensitive skin
	PROCEDURE ZONES		
Blue ML-inductor	On a pancreas Projection	On a projection of the left department of a large intestine	On a medulla zone
Red ML-inductor	on a projection of the lower share of a liver (intermamillar area)	On a projection of the lower share of a liver	On a breast (intermamillar area)

Establish the programmed MODE P8.

Procedure of a lymphatic drainage can be executed using the vibromodule:

for tuning the vibromodule press the «OII/BM» button, on the board will display «V-00»;

pressing the «M/BM-» and «M/BM+» buttons set values of force of influence of the vibromodule: V-08=25%; V-12=50%; V-16=75%; V-20=100% of the maximum force of influence;

on the vibromodule establish a smooth nozzle and we carry out a lymphatic drainage on the lymph flow course.

After carrying out the procedure of a lymphatic drainage the remains of cosmetics we remove using make-up sponges.

MODE P9 Skin regeneration

P9	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
	Regeneration of the skin	1,6-1,8	6	2	15

Execute makeup removal.

Apply the regenerating cream on a zone of procedure.

Execute procedure using an ultrasonic fungoid nozzle.

After carrying out procedure wash away the remains of preparation using warm water or tonic for the corresponding type of skin.

Microdermabrasion

The procedure is carried out on previously cleared and dried skin.

Scheme of procedure performance:

Execute cleaning of skin using a cosmetic milk or other clearing means depending on skin type.

Wash away the milk remains using warm water using wadded make-up sponges.

Establish a coarse-grained nozzle on the vibromodule.

For tuning the vibromodule press the «OII/BM» button, on the board will display «V-00».

Pressing the «M/BM-» and «M/BM+» buttons set values of the force of influence of the vibromodule: V-08=25%; V-12=50%; V-16=75%; V-20=100% of the maximum force of influence.

Establish programmed MODE P1, P2, P3 or another resonant frequency over 50 Hz:

№	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude	Level of MLT, mt
P1	Peeling for the dry, withering and sensitive skin	50-70	5	0	16
P2	Peeling for fat type of skin	70-80	5	0	15
P3	Peeling for problem Skin	70-90	7	0	20

After carrying out procedure, the remains of the clearing means to wash away using warm water.

Apply tonic on face skin.

Microdermabrasion (polishing)

In the case of the fat type of skin using the vibromodule (a nozzle with a small dusting) carry out microdermabrasion (polishing) of skin.

Scheme of performance of procedure:

Fix a fine-grained nozzle on the vibromodule.

For turning on of the vibromodule press «OII/BM» button, on board there be «V-00».

Pressing of the W/V-and W/V+ buttons, we expose the values of the force of influence of the vibromodule: V-08=25%; V-12=50%; V-16=75%; V-20=100% of the maximum force of influence.

Set the programmed P2, P3 MODE.

Carry out the procedure according to the table:

№	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude,	Level of MLT, mT
P2	Peeling for fat type of skin	70-80	6	0	15
P3	Peeling for problem skin	70-90	7	0	20

Vibromassage (biomechanical stimulation)

At the withering skin using the vibromodule (a smooth nozzle) carry out massage on face massage lines of the person and a zone of a decollete.

Scheme of performance of procedure:

Apply massage oil, nutritious cream and other preparation.

Fix a smooth nozzle on the vibromodule.

For turning on of the vibromodule press «OII/BM» button, on board there be «V-00».

Pressing of the W/V-and W/V+ buttons, we expose the values of the force of influence of the vibromodule: V-08=25%; V-12=50%; V-16=75%; V-20=100% of the maximum force of influence.

Set the programmed P1 MODE.

Carry out the procedure according to the table:

№	Name of the mode	Frequency, Hz	Time, min	Ultrasound amplitude,	Level of MLT, mT
P1	Peeling for the dry, withering and sensitive skin	50-70	5	0	15

Magnetolaser stimulation

We recommend to finish a session with procedure of a magnetolaser stimulation:

in case of the dry or withering skin – use a red ML inductor:

in case of fat and problem skin, rosacea of vessels – use a blue ML inductor.

Also, magnetolaser stimulation is recommended to carry out ML when using masks with lifting and ostiole narrowing effect.

Attention!

It is forbidden to carry out magnetophotostimulation in case of infectious diseases.

Scheme of performance of procedure:

In case of using magnetolaser press «OII/BM» button, on board there be «V-00».

Pressing of the «W/V-» and «W/V+» buttons values of magnetic induction and power of an optical stream change in the following sequence:

W -08=25%; W -12=50%; W -16=75%; W -20=100% W -15 mT.

Carry out the procedure using mode P9:

№ P9	Name of the mode	Frequency, Hz	Time, Min	Ultrasound amplitude,	Level of MLT, mT
	Regeneration of skin	1,6-1,8	6	0	16

Using ML-inductor at a distance of 1,5 - 2 cm over the face (body) skin with linear and (or) roundabouts actions, process a face and zone "decollete". The procedure is carried out on massage lines or locally on problem areas.

CHAPTER 5. SPECIAL METHODS TO CARE FOR SKIN WITH THE DEVICE MIT-11 (model COSMO)

Schemes of the movement of ultrasound-radiator and vibromodule (BMS). By linear and (or) roundabouts movements are processed:

Face and "decollete" zone:

from the middle of a forehead to temples; from eyebrows to hairy part of the head;

from a ridge of the nose on the course of a facial vein to the edge of a mandible and further to an ear lobe;

Nasolabial triangle:

from the middle of a chin on the edge of a mandible to a lobe of an ear and further on the course of a forward jugular vein;

Neck:

from an ear lobe on the course of a forward jugular vein down the direction to a clavicle;

from the center of a chin – to bulbar dredging of a breast.

Attention!

It is prohibited to influence by ultrasound to orbital zone, lips and a projection of a thyroid gland.

When carrying out an ultrasonic peeling, it is necessary to moisten periodically an effective area of an ultrasonic nozzle with the warm distilled or mineral water.

When performing procedure of an ultrasonic peeling – **PLACE EMPHASIS ON PROBLEM ZONES!**

5.1. Care for dry, aging, sensitive skin

STEP 1. Biomechanical stimulation.

Execute makeup removal.

Wash away oddments of a purifying agent by warm water (thermal water, tonic) using the make-up sponges.

Apply massage oil or the loosening cosmetic on procedure area (a face, a neck, a "decollete" zone).

Fix a smooth nozzle on the vibromodule.

To turn on vibromodule press «ОП/ВМ» button, there be «V-00» on board.

Establish force of procedure of the vibromodule by pressing of the «W/V-» and «W/V+» buttons:

for tonization of withering skin: V=15 or V=20:

for biomechanical stimulation of sensitive skin V=08 or V=12.

Set the programmed MODE P1.

Perform a vibromassage (biomechanical stimulation) on massage lines of face, neck, "decollete" zone.

Wash away oddments of cosmetic using warm water.

STEP 2. Ultrasound peeling.

Apply the clearing cosmetic on procedure area (face, neck, "decollete" zone).

For ultrasonic peeling execution, using the key on an ultrasonic radiator fix a ridge nozzle of necessary diameter.

Put the «ОП/ВМ» switch in «W» position.

Put the ML-inductors contact on the client's body, light down: the blue – on a medulla zone, red – on a breast (intermammillary area).

Establish the programmed MODE P1.

Execute procedure of an ultrasonic peeling. The radiator is slowly moved with the circular or rectilinear movements on massage lines. Processing of the T-shaped zone by the lateral area of a ridge nozzle (effect of mechanical cleaning) is possible. For the creation of cavitation effect periodically water a nozzle.

Remove oddments of a purifying agent using the wadded make-up sponge moistened with warm water.

STEP 3. Sanding (polishing).

Apply the clearing cosmetic on problem zones, the T-shaped zone.

Fix a compact-grained nozzle on the vibromodule.

To turn on vibromodule press «ОП/ВМ» button, there will be «V-00» on board.

Establish force of procedure of the vibromodule by pressing of the «W/V-» and «W/V+» buttons:

for polishing of the withering skin: V=12 или V=16;

for polishing of the sensitive skin V=08 или V=12.

Establish the programmed MODE P1:

Perform polishing of problem zones.

Remove oddments of a purifying agent using the wadded make-up sponge moistened with a toning lotion.

STEP 4. Phonophoresis.

Apply an ampullary concentrate or gel cosmetic on procedure area (face, neck, "decollete" zone).

For ultrasonic phoresis execution, using the key on an ultrasonic radiator fix a smooth nozzle of necessary diameter.

Put the «ОП/ВМ» switch in «W» position.

Put the ML-inductors contact on the client's body, light on a zone: the blue – on a medulla zone, red – on a breast (intermamillary area).

Establish the programmed MODE P4.

Execute procedure of an ultrasonic phoresis is slowly moving a radiator on massage lines.

STEP 5. Magnetolaser stimulation.

Using the spatula put the simulated mask in the direction from a neck to a forehead. The mask has to be put on the uniform layer.

Put the «OII/BM» switch in «W» position.

Establish the programmed MODE P9.

Execute procedure of magnetolaser stimulation is sluggishly moving a red ML-inductor along lines of massage apart of 1-2 cm from a skin surface.

After removal of a mask, finish the procedure by putting photoprotective cosmetic.

Procedure duration: till 60 minutes totally.

Course: 1-2 sessions a week within a month, as the supporting preventive procedure 1-2 times a month.

5.1. Care for oily skin type

CARE OF ALIPHATIC TYPE OF SKIN

STEP 1. Ultrasound peeling.

Execute make-up removal.

Apply the clearing cosmetic on procedure area (face, neck, "decollete" zone).

For ultrasonic peeling execution, using the key on an ultrasonic radiator fix a ridge nozzle of necessary diameter.

Put the «ОП/ВМ» switch in «W» position.

Put the ML-inductors contact on the client's body, light down: the blue – on a pancreas projection, red – on a projection of the lower share of liver.

Establish the programmed MODE P2.

Execute procedure of an ultrasonic peeling. The radiator is slowly moved with the circular or rectilinear movements on massage lines. Processing of the T-shaped zone by the lateral area of a ridge nozzle is possible. For the creation of cavitation effect periodically water a nozzle.

Remove the remains of the clearing cream using wadded make-up sponges moistened with warm water.

STEP 2. Microdermabrasion.

Dry skin using napkins.

Fix a coarse-grained nozzle on the vibromodule.

For turning on of the vibromodule press the ОП/ВМ button, on a board, there will be «V-00».

Establish by pressing of the «W/V-» and «W/V+» buttons force of procedure of the vibromodule:

V = 06-12-16-20 depending on an influence zone.

Establish the programmed MODE P2:

Execute microdermabrasion of problem zones.

Using wadded sponges moistened with toning lotion wipe face (neck, "decollete" zone).

STEP 3. Phonophoresis.

Apply an ampullary concentrate or gel cosmetic on procedure area (face, neck, "decollete" zone).

For ultrasonic phoresis execution, using the key on an ultrasonic radiator fix a smooth nozzle of necessary diameter.

Establish the «W/V-» and «W/V+» switches in the position «W.»

Put the ML-inductors contact on the client's body, light down: the blue – on a pancreas projection, red – on a projection of the lower share of liver.

Establish the programmed MODE P5.

Execute procedure of an ultrasonic phoresis is sluggishly moving a radiator on massage lines.

STEP 4. Magnetolaser stimulation.

Using the spatula, put the uniform layer ostiole constrictive (simulated, nutritious, moistening) mask in the direction from a neck to a forehead.

Establish the «W/V-» and «W/V+» switches in the position «W».

Establish the programmed MODE P9.

Execute procedure of magnetolaser stimulation is sluggishly moving a blue ML-inductor along lines of massage apart of 1-2 cm from a skin surface.

After removal of a mask, finish the procedure by putting photoprotective cosmetic.

Procedure duration: 60 minutes.

Course: 2 sessions a week within a month, further as the supporting procedure once a month.

5.1.Care for problem skin, reduction of acne

CARE OF PROBLEM SKIN, DECREASE OF THE ACNE

STEP 1. Ultrasound peeling.

Execute make-up removal.

Apply the clearing (loosening) cosmetic on problem face zones.

For ultrasonic peeling execution, using the key on an ultrasonic radiator fix a ridge nozzle of necessary diameter.

Establish the «W/V-» and «W/V+» switches in the position «W.»

Put the ML-inductors contact on the client's body, light down: the blue – on a projection of a sigmoid gut (at the left, in the bottom of a stomach), red – on a projection of the lower share of liver.

Establish the programmed MODE P3.

Execute procedure of an ultrasonic peeling. The radiator is slowly moved with the circular or rectilinear movements on massage lines. Processing of the T-shaped zone by the lateral area of a ridge nozzle is possible. For the creation of cavitation effect periodically water a nozzle.

Right after the procedure of an ultrasonic peeling if necessary, execute manual cleaning of problem zones.

Remove oddments of a purifying agent with the wadded sponges moistened with warm water.

STEP 2. Phonophoresis.

Apply an ampullary concentrate (resolvent) on problem face zones.

For ultrasonic phoresis execution, using the key on an ultrasonic radiator fix a smooth nozzle of necessary diameter.

Establish the «W/V-» and «W/V+» switches in the position «W.»

Put the ML-inductors contact on the client's body, light down: the blue – on a projection of a sigmoid gut (at the left, in the bottom of a stomach), red – on a projection of the lower share of liver.

Establish the programmed MODE P6.

Execute procedure of an ultrasonic phoresis is sluggishly moving a radiator on problem zones.

STEP 3. Magnetolaser stimulation.

Using the spatula, put with the uniform layer ostiole constrictive, drying mask.

Establish the «W/V-» and «W/V+» switches in the position «W.»

Establish the programmed MODE P9.

Execute procedure of magneto laser stimulation influencing by the blue ML-inductor for problem zones apart of 1-2 cm from a skin surface.

After removal of a mask, finish the procedure by putting photoprotective cosmetic.

Procedure duration: 60-90 minutes.

Course: One session in a week within a month, further according to the individual scheme.

CHAPTER 6. APPARATUS "КОСМИТ" for face using

6.1. A description of the apparatus "КОСМИТ" modes in the program for face care

The device «КОСМИТ» for work on a face

The device «КОСМИТ» is intended for carrying out an ultrasonic peeling, phonophoresis, photoactivation, microcurrent stimulation, a vibromassage, microdermabrasion, polishing of skin and a facial vacuum massage (Fig. 5).

The device is intended for application in medical and cosmetology offices, sanatoriums and treatment-prophylactic establishments.



Fig. 5. The device «КОСМИТ»*

*The producer reserves the right to change technical parameters of the device.

The electronic block is manufactured as a separate device and equipped with two castors. On the front panel operating controls and elements of indication are located.

On the left side of housing located: the plug «ИЗЛУЧАТЕЛЬ УЗ» for connection to the electronic block of an ultrasonic radiator, below - the union «ВАКУУМ» for connection of a silicone hose with massage banks.

On the right side of housing «МТФ» sockets are located (for connection to the electronic block of a radiator for a microcurrent photostimulation); The «ВИБРОМОДУЛЬ» (for connection of a biomechanical masser) and "+" and "-" plugs, (or) (for connection of electrodes for microcurrent stimulation).

On a back surface of the housing are located: network power cord, ventilating grate. On the right side of a ventilating grate the network button «СЕТЬ» is located.

Operating controls:

The button «РЕЖИМ» (fig. 6, pos.1) provides installation of the programmed mode (P-A1 - P-A9) for ultrasonic influence (table 5) and the mode (P-I0 - P-I9) for influence by microcurrents (table 6). Switching between programs for microcurrent or ultrasonic influence is carried out by holding the button «РЕЖИМ,» a number of the program is selected (according to tables 1 and 2) by short-term pressing of the «РЕЖИМ» button.

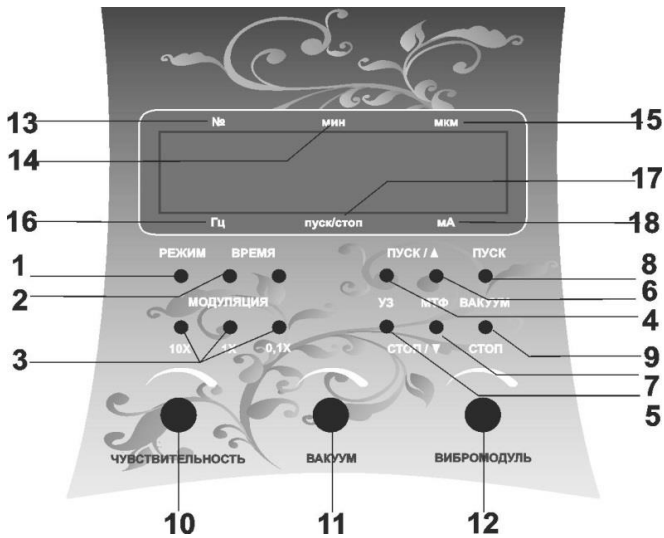


Fig. 6. Front panels of the device «КОСМИТ.»

The button «ВРЕМЯ» (fig. 6, pos. 2) provides installation of duration of realization of procedure: the left-hand button – tens; the right button – units of minutes;

The button «МОДУЛЯЦИЯ» “10x”, “1x” и “0,1x” (fig. 6, pos. 3) provides installation of values of frequency of influence in tens, units of the tenth Hertz, respectively;

The button «ПУСК/▲ УЗ» (fig. 6, pos. 4) provides invoking of ultrasonic procedure by long-term pressing and increase in value of amplitude of ultrasonic fluctuations by short-term pressing;

The button «СТОП/▼ УЗ» (fig. 6, pos. 5) provides switching off of the ultrasonic procedure by the long-term pressing and serial decrease of amplitude of ultrasonic fluctuations – 5; 4; 3; 2 microns by short-term pressing;

The button «ПУСК/▲ МТФ» (fig. 6, pos. 6) provides invoking of procedure of a photostimulation by the long-term pressing and increase in current intensity on electrodes by short-term pressing. Current intensity is established discretely with a step of 0,1 mA; at the same time of setting the value of currently more than zero, begins the procedure annealing;

The button «СТОП/▼ МТФ» (fig. 6, pos. 7) provides switching off of the procedure of a photostimulation by the long-term pressing and the serial decrease of current intensity on electrodes by short-term pressing; The button «ПУСК ВАКУУМ» (fig. 6, pos. 8) provides turning on of the compressor for execution of vacuum massage;

The button «СТОП ВАКУУМ» (fig. 6, pos. 9) provides switching off of the pump for execution of vacuum massage;

The regulator «ЧУВСТВИТЕЛЬНОСТЬ» (fig. 6, pos. 10) is intended to change the tension of electric current on electrodes and allows to choose the most comfortable level of potential for carrying out microcurrent procedures (depends on sensitivity of skin);

The regulator «ВИБРОМОДУЛЬ» (fig. 6, pos. 11) is intended for invoking and adjustment of the force of influence of a biomechanical masseur.

The main information on installations and modes of the device is output to the liquid crystal indicator (LQI): number of work mode “№” (fig. 6, pos. 13), procedure duration “МИН” (fig. 6, pos. 14), value of amplitude of ultrasound fluctuations “МКМ” (fig. 6, pos. 15), value of modulation frequency “Гц” (fig. 6, pos. 16), position of the switch “ПУСК/СТОП” (fig. 6, pos. 17), value of current intensity “МА” (fig. 6, pos. 18).

Primary information on the LQI screen after installation of the «СЕТЬ» switch in position «ВКЛ»:

number of work mode - “№” - “P-A1”;

the value of the amplitude of ultrasound fluctuations - “МКМ” - “A-03”;

the value of current intensity - “МА” - “I-00”;

the value of modulation frequency - “Гц” - “F-32.0”;

procedure duration - “МИН” - “t-15”;

the position of the switch - “ПУСК/СТОП” - “СТОП”.

THE DESCRIPTION OF MODES OF THE «KOCMIT» DEVICE IN PROGRAMS FOR FACE CARE

Table 5 Modes of the «KOCMIT» device at ultrasound influence

№	Name of mode	Frequency, Hz	Time, min	Ultrasound amplitude
P-A1	Peeling for the dry, withering and sensitive skin	32-35; 34	15	3
P-A2	Peeling for fat type of skin	4,4-4,9; 34	15	4
P-A3	Peeling for problem type of skin	2; 34	15	5
P-A4	Phoresis for the dry, withering and sensitive skin	27-79; 50,5	10	4
P-A5	Phoresis for fat type of skin	32-37; 34	15	5
P-A6	Phoresis for problem type of skin	7,5-27; 44	10	5
P-A7	Treatment of cellulitis	10-99	10	4
P-A8	Lymphatic drainage	1,6-11; 69	10	4
P-A9	Regeneration of skin	8-13	10	5

MODE P-A1

Peeling for the dry, withering and sensitive skin

Indications – the age-specific, withering sensitive skin, decrease of turgor and elastance of skin; the polluted, dehydrated or flabby skin and hyperkeratosis, the surface of mimic wrinkles, post-traumatic and post-operational seams.

Execute make-up removal.

Apply the clearing milk for sensitive skin on a procedure execution zone (face, neck).

For the execution of an ultrasonic peeling, using key fix a ridge nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A1.

Execute ultrasound peeling procedure.

After carrying out procedure oddments of cosmetic are washed away with warm water or tonic, in the case of sensitive skin - get wet with a napkin.

MODE P-A2

Peeling for fat type of skin

Indications: skin clarification from horn flakes, waste products of grease and sweat glands, removal of comedos, acne.

Execute make-up removal.

Apply the clearing milk for sensitive skin on a procedure execution zone (face, neck).

For the execution of an ultrasonic peeling, using key fix a ridge nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A2.

Execute ultrasound peeling procedure.

After carrying out procedure oddments of cosmetic are washed away with warm water or tonic, in the case of sensitive skin - get wet with a napkin.

MODE P-A3

Peeling for problem type of skin

Indications: youthful acnes with congestive spots and cicatricial changes, a hyperpigmentation, a nodal erythema.

Execute make-up removal.

Apply the clearing milk for sensitive skin on a execution procedure zone (face, neck).

For the execution of an ultrasonic peeling, using key fix a ridge nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A3.

Execute ultrasound peeling procedure.

After carrying out procedure oddments of cosmetic are washed away with warm water or tonic, in the case of sensitive skin - get wet with a napkin.

MODE P-A4

Phoresis for dry, withering and sensitive skin

Execute make-up removal.

Apply the nutritious or moistening mask, cream or serum on a procedure execution zone (face, neck).

Apply nutritious cream on a zone round eye.

For the execution of an ultrasonic phoresis, using key fix a fungicides nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A4.

Execute procedure of ultrasound phoresis.

MODE P-A5

Phoresis for fat type of skin

Execute make-up removal.

Apply the nutritious or moistening mask, cream or serum on a procedure execution zone (face, neck).

Apply nutritious cream on a zone round eye.

For the execution of an ultrasonic phoresis, using key fix a fungicides nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A5.

Execute procedure of ultrasound phoresis.

MODE P-A6

Ultrasonic phoresis for problem type of skin

Execute make-up removal.

Apply the nutritious or moistening mask, cream or serum on a procedure execution zone (face, neck).

Apply nutritious cream on a zone round eye.

For the execution of an ultrasonic phoresis, using key fix a fungicides nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-A6.

Execute procedure of ultrasound phoresis.

MODE P-A7

Treatment of cellulitis.

Clear skin using a scrub.

Carry out vacuum lymphatic drainage massage (improves blood circulation, strengthens a lymph drainage, opens ostioles).

Carry out “the wrapping” procedure (of such types as mud, algal, clay, cold, hot). For strengthening of effect, simultaneous massage of the processed zones is recommended by an electrobiomassager.

Wash away preparations using hydrolase vacuum douche (water clears, the vacuum opens ostioles, laser radiation stimulates exchange processes at the level of membrane-cellular structures).

Apply anti-cellulite cream.

For the execution of an ultrasonic phoresis, using key fix a fungoides nozzle of big diameter on an ultrasonic radiator.

Establish programmed MODE P-A7.

Carry out phonophoresis locally on zones of fibrosis. If the preparation is quickly absorbed, it is recommended to use massage oil for comfortable movement of a radiator.

Apply anti-cellulite gel.

10. For strengthening the effect of procedure recommend to clients to accept vitamins A and E, broth of a dogrose or singlet and oxygen mix.

MODE P-A8

Lymphatic drainage using ultrasound

Execute make-up removal.

Apply lymphatic drainage mean on a procedure execution zone (face, neck).

Apply cream on a zone round eye.

For the execution of the lymphatic drainage procedure, using key fix a fungoides nozzle of small diameter on an ultrasonic radiator.

Establish programmed MODE P-M8.

Carry out the procedure of an ultrasonic lymphatic drainage smoothly varying rectilinear movements on the lymph course.

After carrying out the procedure of a lymphatic drainage remove oddments of cosmetics using make-up sponges.

Lymphatic drainage using vibromodule

The procedure of a lymphatic drainage can be executed using the vibromodule:

to turn on the vibromodule use the «ВИБРО-МОДУЛЬ» regulator, the force of influence of the vibromodule is regulated by rotation establish a smooth nozzle on the vibromodule and carry out a lymphatic drainage along with the lymph flow course.

MODE P-A9

Regeneration of skin

Execute make-up removal.

Apply is regenerating cream on a zone of procedure.

Execute procedure using an ultrasonic fungoides nozzle.

After carrying out of the procedure, oddments of preparation are washed away by warm water or tonic for the corresponding type of skin.

THE PROCEDURE «MICRODERMABRASION.»

The procedure is carried out on previously cleared and dried skin.

Scheme of procedure execution:

Execute cleaning of the skin using a cosmetic milk or other purifying agents depending on skin type.

Wash away milk oddments by warm water using wadded sponges.

Fix a coarse-grained nozzle on the vibromodule.

Turn on the vibromodule using «ВИБРОМОДУЛЬ» regulator, force of influence of the vibromodule is regulated by rotation of the regulator to the right.

After carrying out procedure wash away oddments of a purifying agent by warm water.

Apply tonic for face skin.

THE PROCEDURE «MICROSANDING» (polishing)

In the case of the aliphatic type of skin carry out micro sanding (polishing) of skin using the vibromodule (a nozzle with a shallow dusting).

Scheme of procedure execution:

1. Execute cleaning of the skin using a cosmetic milk or other purifying agents depending on skin type.

Wash away milk oddments by warm water using wadded sponges

Fix a compact-grained nozzle on the vibromodule.

Turn on the vibromodule using «ВИБРОМОДУЛЬ» regulator, the force of influence of the vibromodule is regulated by rotation of the regulator to the right.

After carrying out procedure wash away oddments of a purifying agent by warm water.

Apply tonic for face skin.

VACUUM FACIAL MASSAGE PROCEDURE

The facial vacuum massage is most effective for:

improvements of a lymph drainage;

improvements of vascularity in a zone of procedure execution;

improvements of a turgor and tone of skin;

muscle relaxation, restitution of forces after heavy exercise or intellectual stress;

rendering antidepressive and antistress actions.

Contraindications to a facial vacuum massage:

The inflammatory phenomena in an influence zone, pustular damages of skin, heavy pathologies of the cardiovascular system, some diseases of internals and nervous system.

Procedure execution technics.

The position of the patient - lying on back or semi-sitting on a chair with the head which is cast away back. Face muscles have to be completely relaxed.

Execute make-up removal.

In the beginning, the preparatory stage is executed. It can be various warming compresses, including those with the use of medicinal herbs.

Then the classical facial massage is carried out.

Execute a light massage of a venous outflow zone of the head blood.

Further, carry out vacuum massage with the use of vacuum pots of a small diameter. Apply the clearing milk on face skin (in the case of

vacuum refining procedure) or massage cream, gel (in the case of tonic vacuum massage procedure).

Contingently divide the face into several working zones: forehead, cheeks, nasolabial triangle, chin, neck, “décolleté” zone.

The vacuum nozzle is attached to a silicone hose. In vacuum nozzles, degree of exhaustion is regulated using an opening on a nozzle and the regulator on the electronic block. Carry out a facial vacuum massage using pots by a labile technique. Sluggishly move pot on a face skin surface with the rectilinear movements on massage lines or in the course of lymphatic vessels (to the next lymph nodes or from the center to the periphery). Actions are repeated several times, gradually increasing the degree of air rarefaction. Finish procedure with mild strokings.

Milk oddments are washed away with warm water using wadded sponges.

Vacuum therapy course includes 7-12 sessions, which are carried out every other day. Duration of one procedure - 5-12 min.

After the termination of a course, it is desirable to carry out the supporting sessions ones a week – for ten days.

6.2. Recommended scheme of microcurrents exposure on the device's "COSMIT"

Recommended scheme of microcurrents exposure on the device's "COSMIT".

Table 6 Working modes of the «KOCMIT» device at microcurrent influence

№	Name	Frequency, Hz	Time, min	Color	Polarity	current intensities
P-I0	Desincrustation	1000	15	R	N	400
P-I1	Iontophoresis – dry type of the skin	2,5-52	5	G	N	600
P-I2	Iontophoresis – oily type of the skin	52-77	7	RG	P	800
P-I3	Iontophoresis - problem type of the skin	53-98	10	GB	P	400
P-I4	Stimulation- the pining and sensitive type of the skin	50-89	10	RG	NP	800
P-I5	Stimulation - normal skin	11-97	10	RG	NP	200
P-I6	Lifting	1-37	5	GB	NP	400
P-I7	Recovery skin turgor	1,6-11; 69	10	RG	NP	600
P-I8	Lymphatic Drainage	27-79; 50,5	5	RB	NP	600
P-I9	Recovery facial muscles	6,8-10; 45	10	RG	NP	400

Movement technics.

Attention: Move electrodes smoothly without breakthroughs!

Microcurrent therapy is carried out on massage lines in the direction from the center to the periphery. The lymphatic drainage is carried out on the lymph flow course (lymphatic drainage lines).

One roller electrode is fixed tranquility on the periphery, by another is carried out the smoothly varying rectilinear movements towards the first.

Electrodes move symmetrically along the line of a wrinkle.

Only one electrode moves.

Movement by both electrodes along a wrinkle.

Short movements, where one electrode remains on site, and another moves to it.

One electrode leads and another is behind, moving wavy.

Two electrodes move away from each other and stretch wrinkles.

On a neck - from an ear lobe on the course of a forward jugular vein down the direction to a clavicle.

From the center of a chin - to bulbar dredging of a breast.

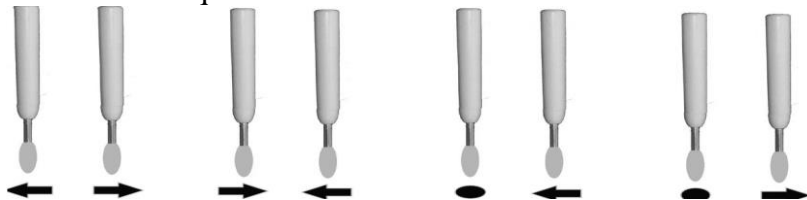
From the middle of a chin on the edge of a mandible to a lobe of an ear and further on the course of a forward jugular vein.

From a ridge of the nose on the course of a facial vein to edge of a mandible and further to an ear lobe.

From temporal area on the course of a mandibular vein down to a mandible corner.

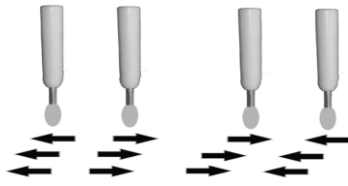
Further influence is carried out on massage lines of the person from top to down.

Movement technique

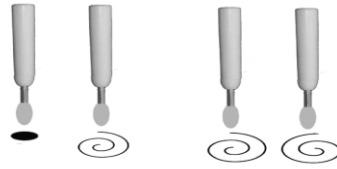


Movement by 2 electrodes along wrinkles

One fixed electrode, second moves.



Movement by 2 electrodes with shift



Movement by 2 electrodes on a spiral

MODE P-I0

Disincrustation

Disincrustation - (electropeeling, cataphoresis, electro elimination) - face cleansing, softening of grease corks using a galvanization by an alkaline solution (disincrustant) from the negative pole of an electrode.

Effect:

- cleansing;
- reepithelizing.
- Indications:
- fat type of skin;
- comedos;
- seborrhea;
- acne;
- melasma (the surface arrangement of a pigment in a basal layer of the epidermis)
- post-inflammatory segmentation;
- early symptoms of skin photoaging;
- shallow wrinkles.

Contraindications:

- oncological and preoncological diseases;
- purulent skin processes;
- extensive violations of a skin integrity;
- systematic skin diseases;

- infectious and viral diseases;
- chronic heart and renal failure;
- Intolerance of electric current.

Technique of procedure execution:

Contingently divide face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Especially carefully disinfection is applied to sites of aliphatic skin: forehead, nose, chin.

Execute make-up removal with the use of cosmetics.

Apply the clearing emulsion on face skin (disinfectant).

Connect electrodes to plugs for microcurrent stimulation: «+» and «-», or $\overline{\Gamma} \overline{\Pi}$. In the electrode connected to the plug «-» (or « Π ») establish wadded spatula (a half, so that cotton wool adjoined to metal), moistened with a disinfectant (saline or soda solution).

The second electrode (roller, cylindrical or a clothespin) connect to the device socket «+» (or « Γ »), during procedure it is in area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothespeg).

Set P-IO mode by short-term pressing of the «РЕЖИМ» button.

Establish the recommended current intensity - "0.5-0.6" by short-term pressing of the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing.

Process face skin is sliding movements of the negative electrode on massage lines, having provided the dense contact of an electrode.

After carrying out procedure, oddments of a disincrustant are removed with warm water using wadded sponges.



- zone and direction of spiral motion of a negative electrode.



zone of fixing of a positive electrode.

Procedure duration - 2-3 minutes per one zone, in the case of sensitive skin procedure duration, is reduced till 1-2 minutes.

Course - 10 procedures.

The frequency of execution - 1-2 times a week.

The supporting procedures - 1-2 times a month. The repeated course - in a 6 months.

P1- I 1-3 IONTOPHORESIS

MODE P-I1 - Iontophoresis – dry type of skin.

MODE P-I2 - Iontophoresis – fat type of skin.

MODE P-I3 - Iontophoresis – problem type of skin.

Iontophoresis – injection of various cosmetics (moisturizing, nutritious and so forth) and medicinal substances using electric current.

Iontophoresis with impulse currents - a method where operating factors are the impulse currents and cosmetics injected with their help.

Action features. Unlike a galvanic iontophoresis, in the pulse iontophoresis mode, electric frequency influence with bio-resonance frequencies of bodies and tissues is additionally applied, which allows to reach faster and notable effect for the smaller period.

Additional injection of cosmetics using bipolar impulses allows avoiding a congestion of negatively charged ions on a skin surface.

Indications:

Determined according to the cosmetic and pharmacological properties of the injected drug.

Contraindications:

All contraindications to use of electric current in cosmetology plus an intolerance of the injected substance.

Technique of procedure execution:

Contingently divide the face into 4 working zones:

- the left part of the face;

- the right part of the face;
- neck area at the left;
- neck area at the right.

Firstly process one-half of the face and neck, then another part.

Execute makeup removal with the use of cosmetics.

Apply a cosmetic or medical preparation on the face (neck) skin.

Connect roller electrodes or a photoradiator in the corresponding sockets.

By the short-term pressing of the «РЕЖИМ» button set working modes - P-I1, P-I2, P-I3. The recommended current intensity - «0.7-1.0» can be established by short-term pressing of the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing;

In the case of using a photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connect to the device socket «+» (or «П»), during procedure it is in area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothespeg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode). The recommended current intensity - «0.7-1.0» can be applied by short-term pressing of the «ПУСК/▲» МТФ button.

Using the regulator smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

Working in the field of eyelids, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in the eyes can be felt. The movements have to be soft.

After carrying out procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min. per zone.

Course – 10-15 sessions.

The frequency of execution – 1-2 times a week.

The supporting procedures – 1-2 times a month. The repeated course – in 6 months.

The direction of movements of electrodes at iontophoresis procedure is presented.

Table 7. Medicinal and the cosmetics, which are often used for an iontophoresis in cosmetology

Substance	Injected ion	Solution concentration or quantity of substance per procedure	Polarity
Aloe	The fluid aloe extract	1:3	+/-
B1 vitamin	Thiamine bromide	2%	+
B12 vitamin	Cyanocobalamine	0,1-0,2 mg	+
E vitamin	Tocopherol acetate	2% in 5% dMCO, 0,5 ml	+
U vitamin	S-methylmethionine	1%	+
Heparin	Heparin sodium salt	5000-10000 Units	-
Hyaluronidase	Hyaluronidase	0,2-0,2 g per 30 ml of acidified to pH=5,0-5,2 Distilled Water	+
Hydrocortisone	Hydrocortisone succinate	1 ampoule dissolved in sodium solution of hydrocarbonate or alkalized to pH 9,0 water	-
Histamine	Histaminum dihydrochloride	0,1% solution to 1 ml	+
Mud (components)	Therapeutic mud	Native mud	
Iodine	Potassium (sodium) iodidum	2-5%	-

Potassium	Potassium chloride	2-5%	+
Calcium	Calcium chloride	2-5%	+
Collagenase	Kollalizin, fermentol	50KE (0,5-1 mg) in physical solution	
Lydasum	Lydasum	0,1 g (64 AE) per 30 ml of acidified water with pH 5,5	+
Lithium	Lithium benzoate (chloride)	2-5%	+
Magnesium	Magnesium sulfate	2-5%	+
Prednisolonum	Copper sulfate	0,2-5%	+
Sulfur	Prednisolonum soluble	0,5%	+
Zincum	Zincum sulfate	0,5-1%	+

P I 4 - P I 5. STIMULATION

MODE I 4 (withering and sensitive types of the skin);

MODE I 5 (normal type of the skin).

STIMULATION - special "gymnastics" for the skin.

Effect:

Tissue ions, the colloid systems of cells protoplasm, cellular membranes that promotes the increase of physiological activity of tissues and stimulation of all types of exchange, are activated. Thus, the transmissivity of cellular membranes increases, and biologically active materials easily get into the skin.

Technique of STIMULATION procedure execution:

Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute makeup removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to the corresponding sockets of the device.


By short-term pressing the «РЕЖИМ» button set the working mode - P-I4, P-I5. The recommended current intensity - «0.2-0.4» can be applied by short-term pressing the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing;

In case of using photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

Working in the part, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in the eyes can be felt. The movements have to be soft.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration– 3-4 min per zone.

For a course of treatment, it is recommended 10 – 15 sessions.

The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

P-I6 LIFTING

Blood supply improves, cell renewal and lifting of skin are stimulated.

Effect: Face lifting occurs, the second chin, sagging of cheeks and already existing wrinkles decrease, connective tissues become stronger.

Technique of execution of skin turgor restitution procedure:

Conditionally divide the face into 5 working zones: forehead, cheeks, nasolabial triangle, chin, decollete zone.

Execute makeup removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to the corresponding sockets of the device.


By short-term pressing the «РЕЖИМ» button set the working mode - P-I6. The recommended current intensity - «0.3-0.6» can be applied by short-term pressing the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing;

In case of using photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions.

Frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

The directions of electrodes movements when performing lifting are presented.

P- I7 RESTITUTION OF SKIN TURGOR

Effect:

Development of collagen and elastin by fibroblasts is stimulated, which give elasticity and elastance to the skin.

Technique of execution of skin turgor restitution procedure:

Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to the corresponding sockets of the device. By short-term pressing the «РЕЖИМ» button set the working mode - P-I7.


The recommended current intensity - «0.1-0.3» can be applied by short-term pressing the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing

In case of using photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of personal pleasant feelings of the client. Mild pricking is a normal reaction.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions.

The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

The direction of electrodes movements for restitution of a turgor of skin is presented.

P - I8 LYMPHATIC DRAINAGE

Impact on the weak facial tissues, with the purpose to achieve outflow of excess liquid and metabolic products on lymphatic vessels.

Effect:

Fatigue removal, restitution of exchange processes in the skin, improvement of oxygen and nutrients delivery, normalization of protective functions of integuments, and as a result removal of hypostases under eyes, tension of muscles under eyes, complexion improvement.

Technique of execution of skin turgor restitution procedure:

Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute makeup removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to the corresponding sockets of the device.


By long-term pressing the «РЕЖИМ» button set the working mode - P-18. The recommended current intensity - «0.1-0.3» can be applied by short-term pressing the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing.

In case of using photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions.

The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

P - 19 STIMULATION OF MIMIC MUSCLES

Functions of muscle fibers, nerve endings and cages are restored.

Effect:

Muscle fibers spasm is eliminated, vessels extend, improves blood circulation.

Technique of carrying out procedure of stimulation of mimic muscles:

Contingently divide the face into 5 working zones: forehead, cheeks, nasolabial triangle, chin, “decollete” zone.

Execute makeup removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to the corresponding sockets of the device.


By short-term pressing the «РЕЖИМ» button set the working mode - P-I9. The recommended current intensity - «0.1-0.3» can be applied by short-term pressing the «ПУСК/▲» МТФ button. At the same time while setting the value of currently more than zero begins the procedure annealing.

In case of using photoradiator it is necessary:

To fix a radiator in the socket.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Switch on a radiator (of photostimulation) by the long-term pressing of the button «ПУСК/▲» МТФ. Color setting is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions.

The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

The direction of electrodes movements at the procedure of stimulation of mimic muscles is presented.

CHAPTER 7. THE DEVICE FOR MICROCURRENT STIMULATION OF THE MBT-01 MT (three versions)

THE DEVICE FOR MICROCURRENT STIMULATION «MBT-01 MT» (three modifications).

The device for facial skin care «MBT-01 MT» - further the device, (fig. 23) it is intended for care of facial skin by execution of microcurrent therapy (impact on an organism with bipolar and monopolar impulses of electric current with a force of 900 micro Ampere and pulse-recurrence frequency of 1000 Hz).



Fig. 7. The device for microcurrent stimulation «MBT-01 MT».

Modifications:

«MBT-01 MT» - microcurrents;

«MBT-01 MTB» - microcurrents and vacuum 1 channel;

«MBT-01 MTΦ» - microcurrents and photoactivation.

Effects of microcurrent stimulation:

- lifting;
- iontophoresis;
- restitution of skin integrity after operations;
- disincrustation;
- elimination of mimic wrinkles and turgor of skin.

Instruction on use of the device MBT- 01 MTΦ (MT, MTB).

The device for the care of facial skin «MBT-01 MTΦ» - further the device, it is intended for the care of the facial skin by execution of ionic massage, by the method of impact on a skin surface with low-level potential and photostimulation.

1. On the top cover operating controls and indications are located (fig. 24).

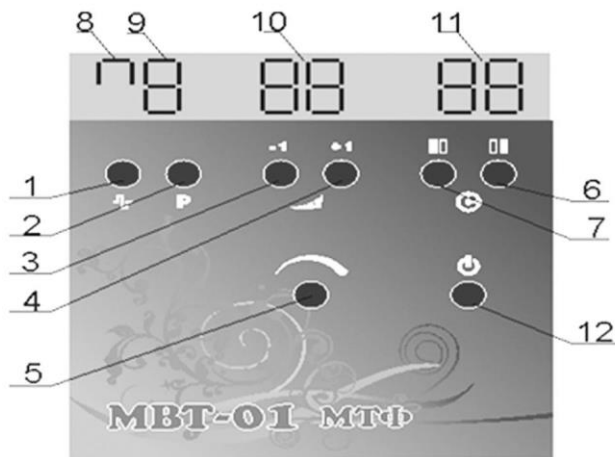







Fig. 8. Front control panel of the MBT-01 MTΦ device


2 Control buttons:


– button  (fig. 24, pos.1) is intended for a choice of signals polarity: positive monopolar, negative monopolar or bipolar;

– button «P» (fig. 24, pos.2), is intended for a choice of the program for ionic massage execution (compliance of modulation frequency of an output signal to some the program is given in table 1) and a premature stop of the device operation;

– button  «-1» and «+1» (pos.3,4), are intended for setting current intensity on electrodes. Current intensity is established discretely with a 0,1 micro Ampere step; at the same time while setting the value of currently more than zero, begins procedure annealing;

– buttons   и  (pos. 6, 7), are intended for installation of procedure time in minutes;

– button «» (pos. 12), is intended for switching on/switching off of a photostimulation;

– regulator  (pos. 5), is intended for a change of tension of electric current on electrodes and allows to choose the most comfortable level of potential for ionic massage execution (depends on the skin sensitivity).

3. Indication elements:

– seven-segment digital indicator (pos. 8) is intended for indication of the established polarity of signals:

- positive monopolar signal - the blinking sign "П", in the case of its installation polarity of labile electrodes corresponds to inscriptions on housing;
- negative monopolar signal - the blinking sign «И», in the case of its installation polarity of labile electrodes opposite to inscriptions on housing;
- bipolar signal - alternately blinking signs «П» и «И»;

– a seven-segment digital indicator of choice of the procedure program (pos. 9), is intended for indication of procedural programs;

– double seven-segment digital indicator (pos. 10), is intended for indication of the established value of current intensity;

– a double seven-segment digital indicator of procedure time (pos. 11), is intended for indication of procedure time;

Output socket «П» and «Ц», are intended for connection of electrodes using a connecting cord.

Output socket «ИЗЛУЧАТЕЛЬ», is intended for connection of a radiator for photostimulation.

Table 8. The modes for work on the face for the MBT-01 MT (MTB, МТФ) device.

Program	Title	Frequency, Hz	Time, min	Color
P0	Disincrustation	0(1000)	10	Blue
P1	Iontophoresis – dry type of the skin	2,5-52	12	Red
P2	Iontophoresis – oily type of the skin	52-77	12	Green
P3	Iontophoresis – problem type of the skin	53-98	12	Green +blue
P4	Stimulation – withering type of the skin	50-89	15	Red+ green
P5	Stimulation – problem type of the skin	11-97	10	Green +red
P6	Lifting	1-10; 37	15	Green +blue
P7	Restitution of skin turgor	1,6-11; 69	10	Green +red
P8	Lymphatic drainage	27-79; 50,5	15	Red+ blue
P9	Restitution of mimic muscles	6,8-10; 45	10	Red+ green

7.1. Recommended schemes to perform procedures on the unit MBT-01 MTΦ (MBT-01 MT, MBT-01 MTB)

THE RECOMMENDED SCHEMES OF PROCEDURE EXECUTION ON THE MBT-01 MTΦ (MBT-01 MT, MBT-01 MTB) DEVICES.

Movement technique.

Attention: Move electrodes smoothly without breakthroughs!

Microcurrent therapy is executed on massage lines in the direction from the center to the periphery.

One roller electrode is fixed tranquility on the periphery, by another, the smoothly varying rectilinear movements towards the first are executed.

Electrodes move symmetrically along the line of a wrinkle.

Only one electrode moves.

Movement by both electrodes along a wrinkle.

Short movements, where one electrode remains on site, and another moves to it.

One electrode leads and another is behind, moving wavy.

Two electrodes move away from each other and stretch wrinkles.

On a neck - from an ear lobe on the course of a forward jugular vein down the direction to a clavicle.

From the center of a chin - to bulbar dredging of a breast.

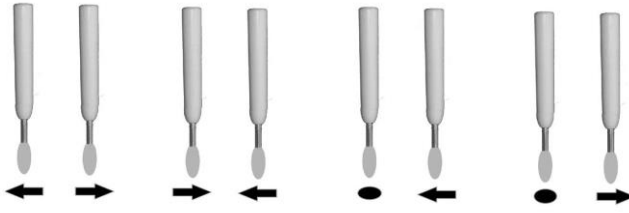
From the middle of a chin on the edge of a mandible to a lobe of an ear and further on the course of a forward jugular vein.

From a ridge of the nose on the course of a facial vein to edge of a mandible and further to an ear lobe.

From temporal area on the course of a mandibular vein down to a mandible corner.

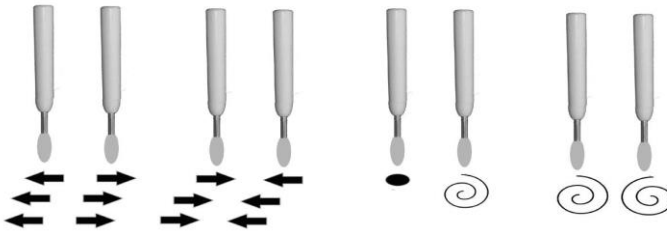
Further influence is carried out on massage lines of the person from top to down.

Movement technique



Movement by 2 electrodes
along wrinkles

One fixed electrode,
the second moves



Movement by 2 electrodes with Movement by 2 electrodes
shift on a spiral

Disincrustation MODE 0

Disincrustation - (electropeeling, cataphoresis, electroelimination) - face cleansing, softening of grease corks using a galvanization by an alkaline solution (disincrustant) from the negative pole of an electrode.

Effect:

- cleansing;
- reepithelizing.

Under the influence of the electrode applied to tissues, there are currents of conduction arising and ions turning into the highly active atoms, forming alkalis and acids. Influencing the skin surface, sour products of electrolysis, possessing high reactivity, due to the increase of their concentration, change pH of skin, destroy desmosomes of keratinocytes of a horn layer and cause their epidermolysis, and also increase the quantity of glycosaminoglycans in a derma and epidermis. Destruction of intercellular communications of keratinocytes within 24 hours causes their migration, reduces the thickness of a horn layer of

the epidermis and thickens a granular layer. Reepithelizing by the second intention causes the formation of more dense structurally ordered epidermis and alignment of skin relief, a decrease of fat skin secretion. The regular procedures of a disincrustation restore structure of derma, improve its resorptive ability.

Indications:

- fat type of skin;
- comedos;
- seborrhea;
- acne;
- melasma (the surface arrangement of a pigment in a basal layer of the epidermis)
- post-inflammatory segmentation;
- early symptoms of skin photoaging;
- shallow wrinkles.

Contraindications:

- oncological and preoncological diseases;
- purulent skin processes;
- extensive violations of a skin integrity;
- systematic skin diseases;
- infectious and viral diseases;
- chronic heart and renal failure;
- intolerance of electric current.

Procedure execution technique:

Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.


Sites of aliphatic skin undergo desincrustation especially carefully: forehead, nose, chin.

Execute make-up removal with the use of cosmetics.


Apply the clearing emulsion on face skin (desincrustant).

Connect an electrode to the socket on the forward panel of the device «И». In a probe of a cup, electrode establishes a spatula (half), moistened with still mineral water of room temperature or with desincrustant.

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «П» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using button  in the device, establish a negative monopolar signal - the blinking sign «И.»

Establish working mode - 0. The recommended current intensity - «5-6,» established using buttons «+1» and «-1.» Installing the value using button «+1» and the blinking signal of a point on time board – is the beginning of procedure.

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

Process face skin by sliding movements of the negative electrode on massage lines and having provided the dense contact of an electrode.



- zone and direction of spiral movement of a negative electrode.



- zone of fixing of a positive electrode.

After procedure execution, oddments of cosmetics are deleted with warm water using wadded sponges.

Procedure duration - 2-3 min per zone, in case of sensitive skin duration, decreases to 1-2 min.

It is 10 sessions for a course.

Execution frequency - 1-2 times a week.

The supporting procedures - 1-2 times a month. The repeated course – in 6 months.

P1-3 IONTOPHORESIS

MODE 1 - Iontophoresis – dry type of skin.

MODE 2 - Iontophoresis - a fat type of skin.

MODE 3 - Iontophoresis - problem type of skin.

Iontophoresis – injection of various cosmetics (moisturizing, nutritious and so forth) and medicinal substances using electric current.

Iontophoresis with impulse currents - a method where operating factors are the impulse currents and cosmetics injected with their help.

Action features. Unlike a galvanic iontophoresis, in the pulse iontophoresis mode, electric frequency influence with bio resonance frequencies of bodies and tissues is additionally applied, which allows to reach faster and notable effect for the smaller period.

Additional injection of cosmetics using bipolar impulses allows avoiding a congestion of negatively charged ions on a skin surface.

Indications:

Determined according to the cosmetic and pharmacological properties of the injected drug.

Contraindications:

All contraindications to use of electric current in cosmetology plus an intolerance of the injected substance.

Technique of procedure execution:


Contingently divide the face into 4 working zones:

- the left part of the face;
- the right part of the face;
- neck area at the left;
- neck area at the right.

Firstly process one-half of the face and neck, then another part. In this case, the area of a thyroid gland should not be bypassed.

Execute make-up removal with the use of cosmetics.

Apply a cosmetic or medical preparation on the face (neck) skin, ampullary, which are applied on facial skin before an iontophoresis or electrodes moistened by them during the procedure. Polarities of the most often used for an iontophoresis in a cosmetology medicinal and cosmetics are specified in the table.


Connect roller electrodes to sockets on the forward panel of the device. Choose signals polarity by means of the button .


Establish the corresponding working mode – 1, 2 or 3. The recommended current intensity – «7-9,» is established using «+1» and «-1» buttons. Installing the value using button «+1» and the blinking signal of a point on time board – is the beginning of the procedure (of microcurrents).


In case of using a microcurrents radiator with a photostimulation it is necessary to execute the following:

Fix a radiator in the socket («ИЗЛУЧАТЕЛЬ»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Choose polarity of signals by means of the button  (active radiator).

Switch on the radiator of photostimulation using the button . Change of color is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client. Mild pricking is a normal reaction.

Process face skin by sliding movements of roller electrodes. The movements of electrodes are made in different directions from each other easily touching skin. At first, we process one part of the face and neck, then another. Movements of electrodes have to be even milder in the case of influence of microcurrents in the field of top and bottom eyelids. The patient can sometimes have bright flashes in eyes. However, it does not constitute any danger and should not cause concern, also as well as a metal flavor in the mouth.

Working in the field of eyelids, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in eyes can be felt. The movements have to be soft.

After carrying out the procedure, oddments of cosmetics should be wetted with a paper towel (napkin).

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

In table 9 medicinal and the cosmetics, which are often used for ionophoresis in a cosmetology are presented

Table 9. Medicinal and the cosmetics, which are often used for an ionophoresis in a cosmetology

Substance	Injected ion	Solution concentration or quantity of substancey per procedure	Polarit
Aloe	The fluid aloe extract	1:3	+/-
B1 vitamin	Thiamine bromide	2%	+
I2 vitamin	Cyanocobalamine	0,1-0,2 mg	+
E vitamin	Tocopherol acetate	2% in 5% dMCO, 0,5 ml	+
U vitamin	S-methylmethionine	1%	+
Heparin	Heparin sodium salt	5000-10000 Units	-
Hyaluronidase	Hyaluronidase	0,2-0,2 g per 30 ml of acidified to pH=5,0-5,2+ distilled water	

Hydrocortison e	Hydrocortisone succinate	1 ampoule dissolved in sodium solution of hydrocarbonate or- alkalized to pH 9,0 water	
Histamine	Histaminum dihydrochloride	0,1% solution to 1 ml	+
Mud (components)	Therapeutic mud	Native mud	
Mud solution			+/-
Iodine	Potassium (sodium) iodidum	2-5%	-
Potassium	Potassium chloride	2-5%	+
Calcium	Calcium chloride	2-5%	+
Collagenase	Kollalizin, fermenol	50KE (0,5-1 mg) in physical solution	
Lydasum	Lydasum	0,1 g (64 AE) per 30 ml of acidified water with pH5,5	+
Lithium	Lithium benzoate (chloride)	2-5%	+
Magnesium	Magnesium sulfate	2-5%	+
Prednisolonu m	Copper sulfate	0,2-5%	+
Sulfur	Prednisolonum soluble	0,5%	+
Zincum	Zincum sulfate	0,5-1%	+

P4-5. STIMULATION

MODE 4 (withering and sensitive type of skin);

MODE 5 (normal type of skin).

STIMULATION - "gymnastics" for skin.

Effect:

Tissue ions, the colloid systems of cells protoplasm, cellular membranes that promotes the increase of physiological activity of

tissues and stimulation of all types of exchange, are activated. Thus, transmissivity of cellular membranes increases, and biologically active materials easily get into the skin.

Technique of STIMULATION procedure execution:


Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to sockets on the device forward panel.


Using button  establish bipolar signal - alternately blinking signs «П» and «Л.»


Establish necessary working mode – 4 or 5. The recommended current intensity - «2-4,» is established by «+1» and «-1» buttons. Installing the value using button «+1» and the blinking signal of point on time board – is the beginning of the procedure (of microcurrents).


In case of using a microcurrent radiator and photostimulation it is necessary to execute the following:

Fix a radiator in the socket («Излучатель»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Л» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using  button choose the polarity of signals (active radiator).

Switch on the radiator (of photostimulation) using  button. Change of color is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

Process facial skin along massage lines, having provided the dense contact of electrodes, on 2-3 cm to the opposite sides and by hatch-

figured movements (by “fir-tree”) during 1-2 sec. It is better to begin from neck or “decollete” zone, then process all skin surface of the face, including eyelids, nose, forehead and repeat (3-5 times).

Working in this part, is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in eyes can be felt. The movements have to be soft.

In the case of working with neck or face, firstly one side of the zone is processed, and then symmetrically another one.

If it is necessary, after procedure execution oddments of cosmetics are deleted with warm water using waded sponges.

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

P6 LIFTING

Improves blood supply, cell renewal and lifting of skin are stimulated.

Effect: Face lifting occurs, the second chin, sagging of cheeks and already existing wrinkles decrease, connective tissues become stronger.


Lifting procedure execution technique:

Contingently divide the face into 5 working zones: forehead, cheeks, nasolabial triangle, chin, “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to sockets on the forward panel of the device.

Using  button establish bipolar signal - there will be signs «II» and «II» blinking alternately.

Establish the working mode – 6. The recommended current intensity - «3-6,» is applied to «+1» and «-1» buttons. Installing the value using


button «+1» and the blinking signal of a point on time board – is the beginning of the procedure (of microcurrents).


In case of using a microcurrents radiator with a photostimulation it is necessary to execute the following:

Fix a radiator in the socket («Излучатель»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is on area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using  button choose the polarity of signals (active radiator).

Switch on the radiator of photostimulation using the button . Change of color is executed automatically (according to the mode).

Using the regulator  smoothly increase tension, taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

Process face skin by sliding movements of the fissile electrode along massage lines, having provided the dense contact of an electrode, during 1-2 sec. It is better to begin from neck or “decollete” zone, then process all skin surface of the face, including eyelids, nose, forehead and repeat (3-5 times). Chin (face form) and superciliary arches are processed by a stable technique (tucks).

Working in part, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in eyes can be felt. The movements have to be soft.

In the case of working with neck or face, firstly one side of the zone is processed, and then symmetrically another one.

If it is necessary, after procedure execution oddments of cosmetics are deleted with warm water using waded sponges.

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – after 6 months.

P7 RESTITUTION OF SKIN TURGOR

Effect:

Development of collagen and elastin by fibroblasts is stimulated, which give elasticity and elastance to the skin. Technique of execution of skin turgor restitution procedure:


Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to sockets on the forward panel of the device.


Using  button establish bipolar signal - there will be signs «Π» and «Ι» blinking alternately.


Establish the working mode – 7. The recommended current intensity - «1-3,» is applied to «+1» and «-1» buttons. Installing the value using button «+1» and the blinking signal of a point on time board – is the beginning of the procedure (of microcurrents).


In case of using a microcurrents radiator with a photostimulation it is necessary to execute the following:

Fix a radiator in the socket («ИЗЛУЧАТЕЛЬ»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ι» (или «-»), during the procedure, it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using  button choose the polarity of signals (active radiator).

Switch on the radiator of photostimulation using the button . Change of color is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

Process facial skin along massage lines, having provided the dense contact of electrodes, on 2-3 cm to the opposite sides and by hatch-figured movements (by “fir-tree”) during 1-2 sec. It is better to begin from neck or “decollete” zone, then process all skin surface of the face, including eyelids, nose, forehead and repeat (3-5 times).

Working in the field of eyelids, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in eyes can be felt. The movements have to be soft.

In case of working with neck or face, firstly one side of zone is processed, and then symmetrically another one.

If it is necessary, after procedure execution oddments of cosmetics are deleted with warm water by means of wadded sponges.

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. Frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in a 6 months.

P8 LYMPHATIC DRAINAGE

Impact on the weak facial tissues, with the purpose to achieve outflow of excess liquid and metabolic products on lymphatic vessels.

Effect:

Fatigue removal, restitution of exchange processes in skin, improvement of oxygen and nutrients delivery, normalization of protective functions of integuments, and as a result removal of hypostases under eyes, pastosity of skin, tension of muscles under eyes, complexion improvement.

Technique of execution of skin turgor restitution procedure:


Contingently divide the face into 5 working zones:

- forehead,
- cheeks,
- nasolabial triangle,
- chin,
- “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to sockets on the forward panel of the device.


Using  button establish bipolar signal - there will be signs «П» and «Ц» blinking alternately.


Establish the working mode – 8. The recommended current intensity - «3-6», is applied by «+1» and «-1» buttons. Installing the value using button «+1» and the blinking signal of point on time board – is the beginning of the procedure (of microcurrents).

In case of using a microcurrents and photostimulation radiator it is necessary to execute the following:


Fix a radiator in the socket («Излучатель»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Ц» (или «-»), during the procedure it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using  button choose the polarity of signals (active radiator).

Switch on the radiator of photostimulation using the button .

Change of color is executed automatically (according to the mode).

Using the regulator  smoothly increase tension taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

It is necessary to begin from cervical muscles. The negative electrode is established permanently at the next lymph node the positive moves to

an external surface of a neck apart to 5 cm between electrodes, depending on neck volume, during 6 sec. Electrodes should not be settled down in a zone of a thyroid gland. Movements are carried out with moderate pressing not to cause unpleasant feelings and not to stretch the skin. The number of lines depends on a form and the volume of a neck. The following stage needs to be begun from the forehead, processing all surfaces of the face, neck, “decollete” zone, and repeat (3-5 times).

During the work on a face, it is necessary to consider an arrangement of chewing and mimic muscles, also the arrangement of vessels and the course of drainage lines.

Movements by the fissile electrode have to be the smoothly varying.

Working on the part, it is necessary to remember that sensitivity of the skin in this area is increased and mild prickings or flashes in eyes can be felt. The movements have to be soft.

In the case of working with neck or face, firstly one side of the zone is processed, and then symmetrically another one.

After procedure execution oddments of cosmetics are deleted with warm water using waded sponges.

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

P9 STIMULATION OF MIMIC MUSCLES

Functions of muscle fibers, nerve endings and cages are restored.

Effect:

Muscle fibers spasm is eliminated, vessels extend, improves blood circulation.

Technique of carrying out procedure of stimulation of mimic muscles:

Contingently divide the face into 5 working zones:


- forehead,
- cheeks,

- nasolabial triangle,
- chin,
- “decollete” zone.

Execute make-up removal with the use of cosmetics.

Apply cosmetic or electricity-conductive gel on face skin.

Connect roller electrodes to sockets on the forward panel of the device.


Using  button establish bipolar signal - there will be signs «П» and «Л» blinking alternately.


Establish the working mode – 9. The recommended current intensity - «1-3,» is applied to «+1» and «-1» buttons. Installing the value using button «+1» and the blinking signal of a point on time board – is the beginning of the procedure (of microcurrents).

In case of using a microcurrents and photostimulation radiator it is necessary to execute the following:

Fix a radiator in the socket («Излучатель»).

The second electrode (roller, cylindrical or a clothespin) connects to the device socket «Л» (or «-»), during the procedure, it is in an area of the nearest lymph nodes (roller), in a hand (cylindrical) of the patient or on a wrist of a hand of the patient (clothes peg).

Using  button choose the polarity of signals (active radiator).

Switch on the radiator of photostimulation using the button .

Change of color is executed automatically (according to the mode).

Using the regulator, smoothly increase tension taking into account achievement of pleasant personal feelings of the client, the mild pricking should not pass into morbid feelings.

The converge-diverge technique of electrodes movements is used. In a forehead area to the opposite sides of pilar part.

It is necessary to begin from the forward surface of a neck, for 6 sec. in each point. The electrodes should be placed at an identical distance, with moderate pressing.

Finish procedure in a forehead area, having passed all zones sequentially.

If it is necessary, after procedure execution oddments of cosmetics are deleted with warm water using waded sponges.

Procedure duration – 3-4 min per zone. For a course of treatment, it is recommended 10 – 15 sessions. The frequency of execution – 1-2 times a week.

The supporting procedure – 1-2 times a month.

The repeated course – in 6 months.

The program of work by microcurrents on the face provides use of several modes. Some of them are shown in table 10.

Total time of procedure of 30-45 min

Type of the skin, indications	Oily-type of the skin			
The recommended modes	P0 Disincrustation	P8 Lymphatic drainage	P9 Stimulation of mimick muscles	P2 Ionophoresis
Contact environment	Disincrustatant or soda solution	EC gel, solution (mineral water)	EC gel, solution (mineral water)	Preparation (ampoules, serums), drug + EC gel
Current intensity	500-700 mcA	300-600 mcA	100-300 mcA	700-1000 mcA

Type of the skin, indications	Oily-type of the skin			
The recommended modes	P8 Lymphatic drainage	P9 Stimulation of mimick muscles	P4, P5 Stimulation	

Contact environment	EC gel, solution (mineral water), Preparation (ampoules, serums)	EC gel, solution (mineral water)	EC gel, solution (mineral water)	EC gel, physical solution P6 Lifting (mineral water)
Current intensity	300-600 mcA	100-300 mcA	100-300 mcA	300-600 mcA

Type of the skin, indications	Withering skin, deep wrinkles			
The recommended modes	P6 Lifting	P9 Stimulation of mimic muscles	P7 Restitution of skin turgor	P4 Stimulation P2 Ionophoresis
Contact environment	EC gel, solution (mineral water)	EC gel, solution (mineral water)	EC gel, solution (mineral water)	Preparation (ampoules, serums), drug + EC gel
Current intensity	300-600mcA	100-300mcA	100-300mcA	200-400mcA 700-1000 mcA

CHAPTER 8. THE DEVICE FOR MYOSTIMULATION, АЭСТ-01 model “FACE“

THE DEVICE FOR MUSCLE TONING AEST-01 (2-CHANNEL, MODEL “FACE“).

The device for muscle toning AEST -01 (fig.34) is intended for electric stimulation of face muscles, neck and “decollete” zone by electric impulses through two channels.



Fig. 9. The appearance of the AEST-01 device (model «FACE»).

Operating procedure:

Install the electronic block no more than 1,5 m apart from the power supply socket. Remove a protecting membrane from a board.

Install the « CETЬ » switch on the side panel of the electronic block in the position «0».

Connect the electronic block to a network of 220 V 50 Hz using a network cord.

Connect to output sockets «КАНАЛ 1» and «КАНАЛ 2» of the electronic block connecting cords with electrodes.

Install the «СЕТЬ» switch in the position «I». Thus, the audible signal is sounded and on a board, primary values are established.

Electrodes are intended for reusable individual use. Before procedure of a face muscle toning (neck, “decollete” zone) it is necessary to clear it previously.

Put electrodes on the patient's face. If necessary, it is possible to use electricity-conductive gel and clamps (it is also possible to use food membrane for fixing).

Using the «РЕЖИМ» buttons set a device mode, according to Table 10.

Table 10. AEST-01 working modes

№ mode	Mode title	Duration, min	Staging of channels
P1	« Crow's feet »	22	antiphase
P2	Blepharoptosis	26	synphasic
P3	Forehead folds	24	antiphase
P4	Nasolabial folds	28	synphasic
P5	Bulldog's cheeks	24	antiphase
P6	Correction of a face form	24	synphasic
P7	Second chin	28	antiphase
P8	Stimulation of a neck, “decollete” zone	25	synphasic

If the device works in the synphasic mode (electric impulses at the exit of both channels move at the same time) indicators of signals (fig. 10 pos. 5,6) blink at the same time.

If the device works in the antiphase mode, (electric impulses in turn move on an exit the «КАНАЛ 1» and «КАНАЛ 2») indicators of signals blink in turn.

9. Install handles the «КАНАЛ 1» and «КАНАЛ 2» in situation extreme counterclockwise.

10. Press the «СТАРТ» button.

Attention! If before pressing the «СТАРТ» button one of the current regulators is not removed in the minimum (extreme left-hand) situation, the device passes into the «СТОП» mode, the audible signal is distributed and the indicator of a signal of the respective canal blinks (emergency operation). For escaping of this mode after installation of the regulator in a minimum situation rather repeatedly to press the «СТАРТ» button.

11. Using the handle the «КАНАЛ 1» smoothly increase the amplitude of output impulses of the first channel until receiving steady and painless reductions of muscle.

Attention! To make an increase in the amplitude of output impulse only during signal indicator luminescence (fig.35 pos.5).



Fig. 10. Front panel of the device

12. Using the handle the «КАНАЛ 2» smoothly increase the amplitude of output impulses of the first channel until receiving steady and painless reductions of muscle.

Attention! For which increasing the amplitude of output impulses are only during a signal indicator luminescence (fig. 10 pos.6).

If at during procedure, there will be a need to replace mode of the device, it is necessary to install handles in situation extreme counterclockwise, to press the «СТОП» button, using the «РЕЖИМ» buttons to set a necessary duty, to press the «СТАРТ» button.

For a premature stop of procedure to press the «СТОП» button.

Upon termination of procedure time the audible signal is distributed and on board are established initial value. To install handles in situation extreme counterclockwise.

At the end of the working day install the «СЕТЬ» switch in the situation "0" and disconnect a network cord from a network of 220 V of 50 Hz.

8.1. Practical guidelines for the implementation of procedures on the device АЭСТ

PRACTICAL RECOMMENDATIONS ABOUT PROCEDURES EXECUTION USING THE AEST-01 DEVICE

At reference techniques of a muscle toning of the person one couple electrodes from each channel are used. Two padding electrodes are used only in case of the botulu toxin which is earlier applied at the patient.

Because the person has asymmetric conduction (various conduction of the left-hand and right side of the person), installation of electrodes is carried out separately on the left-hand and right parties (on one party electrodes from one channel, and on the second - from another are imposed). The amplitude control of an output signal is carried out separately for the left-hand and right side of the person, and at the expense of it, comfortable realization of procedure is provided.

8.2. Problems of top part of the face

PROBLEMS OF THE UPPER PART OF THE FACE

“Crow's feet.”

MODE P1

Indications: The shallow mimic wrinkles located in external corners of eyes - "Glaucous goosefoot".

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 11):

installation of electrodes of 1 channel on a left-hand side: one electrode on chin area, the second - on temporal area.

installation of electrodes 2 channels on the right side: one electrode on chin area, the second - on temporal area (fig. 11).

Procedure parameters:

Set the programmed P1 mode on the device.

Amplitude of impulses – BEFORE EMERGENCE OF VISIBLE, COMFORTABLE REDUCTIONS

Emergence reasons:

physiological features of the structure of an integument in this area: the poor quantity of sebaceous glands which create a so-called hydrolipidic layer, leads to that skin in this place is not capable of being resilient, elastic and steady against external influences;

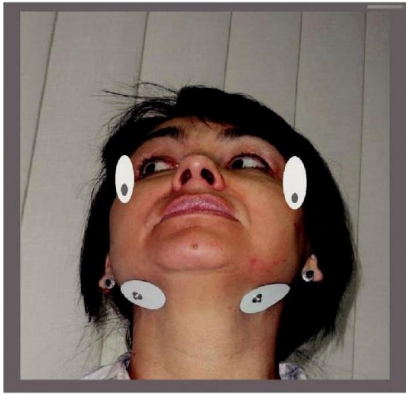


Fig. 11. The scheme of imposing of electrodes for the P1 model «Crow's feet» and P2 mode «Blepharoptosis.»

➤ Poor care of skin round eyes. Considering natural dryness of a false skin, it needs careful protection which can be created by means of continuous humidification. For this purpose it is necessary to apply regularly cream, to use the express masks and other funds allocated for maintaining of fatty balance;

➤ excessive emotionality. Certainly, the fissile mimicry represents one of the major factors predetermining emergence of wrinkles. Everyday deformations of skin under the influence of mimic muscles which are urged to express an emotional condition of the person, lead to its stretching. Formed as a result of a fold over time cease to be smoothed self-contained;

➤ improper feeding. Skin needs nutrients and vitamins which could provide its healthy appearance. The improper diet, in particular, abuse of aliphatic dishes and smoked products does not allow to carry out this task;

➤ the negative influence of stressful situations and surrounding medium, including weather conditions and environmental problems “Blepharoptosis”.

MODE P2

Indications: visible sagging of the weak fabrics of an upper eyelid.

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 11):

➤ installation of electrodes of 1 channel on a left-hand side: one electrode on chin area, the second - on the temporal area.

➤ installation of electrodes 2 channels on the right side: one electrode on chin area, the second - on the temporal area (fig. 11).

Procedure parameters:

Set the programmed P2 mode on the device.

The amplitude of impulses – BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

The contour of an upper eyelid is formed by two muscles: the circular muscle of an eye and a muscle raising an eyebrow.

The circular muscle of an eye – regulates the width of a palpebral fissure, holds the retrobulbar fat inclined to hypostasis. The continuous movements promote a drainage of a lymph and stimulate humidification of a cornea with plaintive liquid, squeezing a plaintive sack.

The circular muscle of an eye consists of several bunches which can be reduced separately. Therefore, such situation when the muscle works (there is a clamping a century, blinking, expansion of a palpebral fissure, etc.) is possible, but some muscle bunches do not participate in work. We observe such phenomenon at a ptosis of an upper eyelid, bound to an atony of an upper outside of a circular muscle of an eye.

The reasons of the acquired ptosis of an upper eyelid:

➤ decrease in a tone of muscles (the circular muscle of an eye and a muscle raising an eyebrow) participating in a raising of an upper eyelid. Decrease in a tone of muscles can be bound to a violation of an innervation (a paresis of a facial nerve), an overvoltage of muscles antagonists, introduction under the skin of the substances breaking a neuromuscular transmission (botox, disport).

➤ hypostasis of the weak tissues of the eyelid. Chronic hypostasis of the weak fabrics is often bound to deterioration of the function of

kidneys and metabolic disorders. Accruing swelled gradually switch off a muscle from the fissile work. On the other hand, lack of noticeable muscle activity leads to deterioration of a lymphatic drainage of the area of an upper eyelid, that aggravates the hypostasis phenomena. The interrelation is obvious.

➤ hernia of a retrobulbar fat. Hernia of a retrobulbar fat - penetration of a part of a retrobulbar fat under the skin of an upper eyelid in those places where there was an atrophy of fibers of a circular muscle of an eye.

➤ stretching of the skin of blepharons. Stretching of the skin of blepharons is a consequence of the long-lived and expressed hypostases. The person is more senior; is a higher danger of that at a decrease of hypostasis skin will not be able adequately to be reduced.

“Forehead folds” MODE P3

Indications: wrinkles on a forehead.

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 12):

Variant 1.

installation of electrodes of 1 channel on a left-hand side: one electrode on area of glabella arches, the second - on temporal area.

installation of electrodes 2 channels on the right side: one electrode on the area of glabella arches, the second - on the temporal area (fig. 12 a).

Variant 2

installation of electrodes of 1 channel on a left-hand side: one electrode on the superciliary area, the second - on the left-hand area of a chin.

installation of electrodes 2 channels on the right side: one electrode on the superciliary area, the second - on the right area of a chin (fig. 12).

Procedure parameters:

Set the programmed P3 mode on the device.

The amplitude of impulses - BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

First of all, the emergence of wrinkles on a forehead and not only is a natural process age changes of the skin. Over time skin becomes dry and dehydrated, and the fat which is in cells of skin starts being distributed nonuniformly, and as a result of this nonuniformity on a face in places of big muscle, activity wrinkles are formed.



Figure 12. The scheme of imposing of electrodes at the mode 3 "Forehead folds."

Emergence reasons:

- genetic predisposition to early violation of operability of endocrine glands which can be transferred from parents;
- ecological conditions (bright sun, the strong wind, badly or brightly lit workplace). Because of these factors, it is necessary to wrinkle constantly a forehead or to frown therefore wrinkles are formed;
- sharp weight loss (because of unexpected decrease of shapes of a face skin droops or it is wrinkled);
- psychological factors — a fatigue and a stress. Negative emotions are capable of causing a vasospasm, violation of blood circulation of cages and as result — a skin aggravation of symptoms. Moreover, at the negative emotions the person gets the frowned expression which the main responsible for emergence the glabella wrinkles in turn is.

➤ unwillingness to wear glasses. In a sunny weather, it is necessary to put on sunglasses. Moreover, if you broke vision, to do without points or contact lenses in any way it is impossible, and, certainly, it is necessary not only for prophylaxis of wrinkles. Often the increased mimic activity is the reason for education on a forehead of vertical wrinkles.

“Nasolabial folds” MODE P4

Indications: nasolabial folds. Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 13):

Variant 1.

installation of electrodes of 1 channel left side: one electrode on a chin at the left, the second - on a cheekbone zone.

installation of electrodes 2 channels right side: one electrode on a chin on the right, the second - on a cheekbone zone (fig. 13 variant 1).

Variant 2.

installation of electrodes of 1 channel left side: one electrode on chin, the second - near a mouth corner.

installation of electrodes 2 channels right side: one electrode on chin, the second - near a mouth corner (fig. 13 variant 2).

Variant 3.

installation of electrodes of 1 channel left side: one electrode on chin, the second - on a zone of the top third of a nasolabial fold (fig. 13).

installation of electrodes 2 channels right side: one electrode on chin, the second - on a zone of the top third of a nasolabial fold (fig. 13).

Procedure parameters:

Set the programmed P4 mode on the device.

The amplitude of impulses - BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

Nasolabial folds are formed by two grooves going from a nose to mouth corners which are especially noticeable with a smile. In essence, nasolabial folds are deep wrinkles and are put in a muscular layer very much early.

Some face muscles are responsible for emergence of nasolabial folds:

The top part of a nasolabial fold is formed as a result of a spasm of the wing part of a nasal muscle and a hyper tone of the muscle raising a wing of a nose and an upper lip and which is partially interwoven into a nasal muscle.

The middle and lower part of a nasolabial fold are formed by a hyper tone of small and big malar and cheek muscles. The fold in corners of a mouth arises owing to a spasm of the muscles lowering a mouth corner (a triangular muscle) and lower lip.

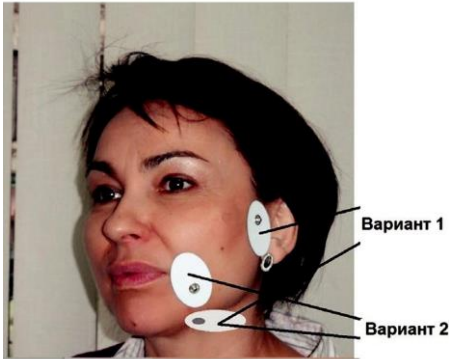


Fig. 13. The scheme of imposing of electrodes at the mode 4 "Nasolabial folds."



Fig. 14. The scheme of imposing of electrodes at the mode 4 (option 3) "Nasolabial folds."

Reasons of emergence of nasolabial folds:

Nasolabial folds the same as как « crow's feet » and folds between eyebrows, treat mimic wrinkles which can be formed as a result of a

hyper tone (the increased tension) or, on the contrary, a hypotonic of muscular tissue.

The hypotonia can be provoked by a violation of outflow of a lymph and blue blood. Stagnation of excess liquid in intercellular space leads to decrease in a muscular tone and sagging of skin. The fatty body of cheeks starts moving gradually down, from it results in gravitational $\pi\pi\text{O}_3$, one of which manifestations are nasolabial folds. Slackness of muscles can also develop as a result of deformation of bone structures.

The hyper tone is observed when shortening mimic muscles which age changes of an organism happen in the process. The spasm of muscular tissue leads to skin stretching. With age elastin in a term becomes less, therefore, some sites of an integument droop that, in turn, serves one of the main prerequisites to the manifestation of nasolabial folds.

Anatomic features of the person, skin.

Processes natural age changes of skin, $\pi\pi\text{O}_3$ soft fabrics, a decrease of a tone of front muscles promote deepening of nasolabial folds and do them more noticeable.

Way of life (abuse of alcoholic drinks, smoking, improper feeding);

External influences (continuous radiation by an ultraviolet, direct contact with chemical reagents, severe climatic conditions, etc.).

“Bulldog's cheeks” MODE P5

Indications: the drooped sites of skin and hypodermic and fatty cellulose in a zone of the lower jaw breaking a normal face contour.

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 14):

installation of electrodes of 1 channel left side: one electrode on a chin at the left, the second - a zone of a bulldog's cheek.

installation of electrodes 2 channels right side: one electrode on a chin on the right, the second - a zone of a bulldog's cheek (fig. 14).

Procedure parameters:

Set the programmed P5 mode on the device. Amplitude of impulses – BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

Bulldog's cheeks are the drooped sites of skin and hypodermic and fatty cellulose in a zone of the lower jaw breaking a normal face contour.

Their emergence is connected with decrease in the general tone of the person and weakening of the chewing muscle sagging on both sides from a chin forming senile sacks (or as they are called still, "bulldog's cheeks").

Reasons:

Age weakening of a framework of face skin, omission of soft fabrics.
decrease in the content of collagen and elastin.

gravitational ptosis.

Omission (ptosis) of soft facial tissues is a characteristic sign of age weakening of a framework of skin. After 30-35 years the content of collagen and elastin - the structures supporting skin is sharply reduced; the sheaves fixing hypodermic cellulose weaken and can't resist gravity. Fatty tissue on a face is displaced down, stretching skin. The "bulldog's cheeks" giving to a face form a wavy contour are so gradually formed



Fig. 15. The scheme of imposing of electrodes at the mode 5 «Bulldog's cheeks»

8.3. Problems of lower part of the face

PROBLEMS OF THE LOWER PART OF FACE

“Correction of a face form ”

MODE P6

Indications: changes of a face form

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 16):

installation of electrodes of 1 channel left side: one electrode on a chin at the left, the second - on a cheekbone zone.

installation of electrodes 2 channels right side: one electrode on a chin on the right, the second - on a cheekbone zone.

Procedure parameters:

Set the programmed P6 mode on the device.

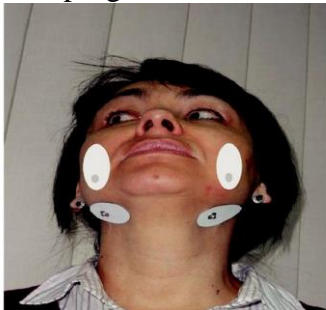


Fig. 16. The scheme of imposing of electrodes at the mode 6 "Correction of a face form"

Amplitude of impulses - BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

Reasons of change of a face form:

Age changes of structure of skin. Production of collagen and elastin decreases, skin becomes less elastic and elastic and by that changes outlines of the person.

In the second layer to skin – a term (actually to the skin) blood and lymphatic vessels, the nervous terminations, elastin-collagenic fibers are located. Derma plays a role of a framework which provides elasticity, durability and tensile properties of skin. It can be compared to an unusual mattress where the role of springs is played by fibers of collagen and elastin.

Collagen is a substance which fills space between muscle fibers and cages of many bodies. There is it in ligaments and sinews, on a surface of cells of the skin and in intercellular space. If there is enough and quality of collagen in skin, it maintains turgor of skin, and therefore a form of an oval of our person.

Also, it is slowed down also a renewal of the skin cells. Because of action of these factors (without speaking about harmful action of the sun, hereditary tendency and fluctuations of weight) skin starts drooping – first of all around cheeks and jaws. Sagging leads skin and to the expansion of face pores.

Changes superficial muscle-aponeurotic systems (SMAS), a structure which is responsible for the coordinate movement of facial muscles and the harmonious movement of muscles and skin; SMAS loses the elasticity. Eventually, stretches and, as a result, changes a face contour.

Age changes of mimic muscles and sheaves – their anatomic changes aren't so essential, however also influence the change of a face form.

Gravitation of Earth.

Wrong deposits of fat in the chin. Besides, hypodermic fatty cellulose become thinner with age and, often, under the influence of gravitation move down;

Facial skeleton. With age the bite (its height decreases) changes, the bone tissue is exhausted (the size of an orbit, the lower jaw and so forth changes)

“Second chin” MODE P7

Indications: fatty and skin fold under the edge of a lower jaw and in a neck.

Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 17):

installation of electrodes of 1 channel left side: one electrode on a chin at the left, the second - on a cervical collar a zone paravertebral (fig. 17).

installation of electrodes of 1 channel right side: one electrode on a chin at the right, the second - on a cervical collar a zone paravertebral (fig. 17).



Fig. 17. The scheme of imposing of electrodes at the mode 7 "Second chin."

Procedure parameters:

Set the programmed P7 mode on the device. The amplitude of impulses - BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

Reasons for emergence of a double chin:

congenital features which are descended. If mother already in youth had the second chin, most likely, the same will be and at the daughter.

excess weight. The chin is considered a zone which grows stout one of the first.

fast weight loss. As a result the second chin droops and is formed. This its version most often meets at women after 35-38 years - at this age, there is a decrease the elasticity of properties of skin. Therefore, it is

necessary to grow thin gradually so that monthly loss of weight made no more than 3-5% of body lump
orthopedic problems. They can be different, however the wrong bearing is in the first place. On the second - osteochondrosis of the cervical department of a backbone.

“Stimulation of neck, “décolleté” zone” MODE P8

Indications: cosmetic problems of a neck and zone of a décolleté. Execute make-up removal.

Impose electrodes according to the scheme of imposing (fig. 18):
installation of electrodes of 1 channel left side: one electrode on a chin at the left, the second electrode on a décolleté zone (fig. 18).
installation of electrodes 2 channels right side: one electrode on a chin on the right, the second electrode on a décolleté zone (fig. 18).



Fig. 18. Scheme of imposing of electrodes at the mode 8 "Stimulation of a neck, “décolleté” zone."

Procedure parameters:

Set the programmed P8 mode on the device. The amplitude of impulses – BEFORE EMERGENCE of VISIBLE, COMFORTABLE REDUCTIONS.

Factors, influencing aging of a neck skin and a “décolleté” zone.
anatomic features of muscles of a neck.

- age changes,
- heredity,
- improper feeding,

- sharp weight loss or set of weight,
- backbone curvature,
- the negative influence of weather conditions.

Muscles are generally concentrated on a back surface of a neck, only their insignificant part is the share of a lobby. Thin skin is in front almost deprived of support. Besides muscles also are located differently, and are reduced diversely that leads to the formation of cross folds. Their same multidirectional arrangement provides to skin the increased elasticity.

Due to the small number of sebaceous glands, reduces the protective function of the skin. The deterioration in the tone of the neck muscles contributes to our lifestyle: we will stoop, incorrectly we sit, we read lying, we sleep on a high pillow.

Age changes of skin in a zone of a neck and decollete first of all are shown by the loss of elasticity and elasticity of skin.

Due to the lack of hypodermic fatty cellulose, skin is in the field too thin and can't independently cope with influences of time and environment.

With age, production of collagen (a protein which provides elasticity of the skin) inevitably decreases.

CONTRAINDICATIONS TO EXECUTION OF MUSCLE TONING OF FACE, NECK AND THE "DECOLLETE" ZONE

General:

- oncological diseases,
- feverish states,
- purulent processes,
- extensive violations of the integrity of skin,
- system diseases of the skin,
- chronic heart failure,
- pregnancy, the existence of a pacemaker,
- individual intolerance of current.

Specific (in case of work on a face):

- arthritis also plays the dandy in an aggravation stage,
- cysts and tumoral diseases of a breast,
- gold reinforcing,
- surgical face lifting, expeditious correction of sight – only after consultation with the surgeon,
- diseases of a thyroid gland.

If the reason of a ptosis in weaknesses of a muscular framework, neither botox nor peeling, fillers aren't shown. Iono-phoresis and a mesotherapy with the corresponding preparations have the mediated effect. The only factor operating directly on a tone of muscles – electric muscle toning.

Current impulses, affecting excitable muscular and nervous tissue, cause reduction of muscle fibers. The main effect of an electric muscle toning is strengthening of muscles. In passing, there is a strengthening blood and lymph circulation, restoration of an innervation, positive shifts of a metabolism.

Thus, at the decrease in a tone or atrophy of muscles – an electric muscle toning, most effective method of influence. Thus, the electric muscle toning can be combined with massage, masks, a mesotherapy, and other methods.

8.4. Assessment the level of anxiety and depressive patterns, and compensation methods in programs of the face care

Assessment of level of disturbing and depressive frustration and ways of its compensation in programs for face care.

The anxiety, the latent depression, and syndrome of chronic fatigue are the most widespread (are shown approximately at 30% of the healthy population of the developed countries) the mental and emotional diseases having a huge impact on quality and life expectancy of the modern person today. Due to the feature prevalence of these diseases many experts consider anxiety "a psychological virus", and depression - "psychological cold."

Successfully to struggle with this illness is necessary to define its existence at the specific client in the beginning, and then to distinguish his version and extent of the defeat of a psychological state. Are approved by us and some various psychological tests and techniques are offered to practical application.

Scale of situational and personal anxiety of Spielberg-Khan

Read attentively each of the offers given below and cross out the corresponding figure depending on that, how do you feel on the right at present. Answer the first that came to mind.

Self-assessment scale "situational anxiety" (SA).

№	Test questions	No, it's not (1)	Maybe Yes (2)	Correct (3)	Absolutely correct (4)
1.	I'm quiet				
2.	Nothing threatens to me				
3.	I'm in tension				
4.	I feel compassion				
5.	I feel free				
6.	I'm upset				
7.	I'm excited the possible failure				
8.	I feel rested				
9.	I'm anxiety				
10.	I have a feeling of Internal satisfaction				
11.	I'm self-assured				
12.	I'm nervous				
13.	I can't find any peace				
14.	I'm excited				
15.	I'm not feeling constraint, tension				
16.	I'm satisfied				
17.	I'm disturbed				
18.	I'm too excited and feel strongly				
19.	I feel joyful				
20.	I feel pleasant				

Self-assessment scale "personal anxiety" (PA).

№	Test questions	No, it's not (1)	Maybe Yes (2)	Correct (3)	Absolutely correct (4)
1.	I feel pleasure				
2.	I get tired quickly				
3.	I can begin cry easily				
4.	I want to be same happy, as others				
5.	Happens that i lose, because i accept decisions slowly				
6.	I feel vigorous				
7.	I'm quiet, cold-blooded and assembled				
8.	Expectation of difficulties strongly disturbs me				
9.	I'm strongly worried because of trifles				
10.	Happens, that I feel completely happy				
11.	I accept everything very close to heart				
12.	I don't have enough self-confidence				
13.	I feel safe				
14.	I try to avoid critical situations and difficulties				
15.	Melancholy may occur with me				
16.	Sometimes, i feel satisfied				
17.	Any trifles distract and excite me				
18.	I so strongly endure of my disappointments then that i can't long forget about them				

19.	I'm poised, person				
20	I'm covered by strong concern when I think of the affairs and cares				

Key to test on anxiety. Situational anxiety

SA=(3,4,6,7,9,12,13,14,17,18)-(1,2,5,8,10,11,15,16,19,20).

Personal anxiety

PA= (2,3,4,5,8,11,12,14,15,17,18,20) - (1,6,7,10,13,16,19) + 35 (number 35).

Spielberg-Khan anxiety test interpretation. Up to 30 points – low anxiety

31-45 points – middle anxiety.

46 points and higher – high anxiety.

Assessment scale of a depression level of Beck.

The assessment scale of a depression level of Beck (Beck Depression Inventory) is used for diagnostics of the level of depression. The method is offered by Aaron T. Beck in 1961 by the clinical supervision which allowed revealing the list of symptoms of depression.

This questionnaire contains groups of statements. Attentively read each group of statements. Then define one statement which best of all corresponds to how you felt this week and today in each group. Put a tick about the chosen statement. If some statements from one group seem to you equally well suitable, put ticks about each of them. Before making the choice, be convinced that you read all statements in each group.

Cognitive and affective subscale (C-A)

№	Choice	Your state
1		0 I don't feel frustrated, sad. 1 I'm upset. 2 I'm upset all the time and can't stop pay attention to it. 3 I'm so upset and unhappy that can't handle it
2		0 I'm not worried about my future. 1 I feel perplexed about the future. 2 I feel that there's nothing for me in the future. 3 My future is hopeless, and nothing can change it
3		0 I don't feel like a loser. 1 I feel I suffered more mishaps than other people. 2 When I look back on my life, I see a lot of failures in it. 3 I feel that as a person I am a total loser.
4		0 I get just as much satisfaction from life as before. 1 I don't get the same satisfaction from life as before. 2 I didn't get any satisfaction from anything. 3 I'm not satisfied with my life entirely, and I'm sick of it.
5		0 I don't feel guilty of something. 1 I feel guilty quiet often. 2 Most of the time I feel guilty. 3 I always feel a sense of guilt.
6		0 I don't feel like I can be punished for anything. 1 I feel I may be punished. 2 I expect to be punished. 3 I already feel punished.
7		0 I'm not disappointed in myself. 1 I'm disappointed in myself. 2 I'm sick of myself. 3 I hate myself.
8		0 I know I'm not worse than others. 1 I criticize myself for mistakes and weaknesses. 2 I blame myself for my actions. 3 I blame myself for everything bad that happens.
9		0 I never thought to kill myself.

		<p>1 I have thoughts of killing myself, but I won't implement them.</p> <p>2 I would like to commit suicide.</p> <p>3 I would have killed myself if had the chance.</p>
10		<p>0 I'm not crying more than usual.</p> <p>1 Now I cry more often than before.</p> <p>2 Now I cry all the time.</p> <p>3 I used to be able to cry, but now I can't, even if I want</p>
11		<p>0 Now I am not more irritable than usual.</p> <p>1 I am more easily irritated than before.</p> <p>2 Now I constantly feel annoyed.</p> <p>3 I became indifferent to the things that I was annoyed from.</p>
12		<p>0 I haven't lost interest in other people.</p> <p>1 I am less interested in other people than before.</p> <p>2 I almost lost interest in other people.</p> <p>3 I completely lost interest in other people.</p>
13		<p>0 I put off making the decision sometimes, as in the past.</p> <p>1 I postpone the decision more often than before.</p> <p>2 It's harder for me to make decisions, than ever before</p> <p>3 I can no longer make decisions.</p>
Subscale of somatic manifestations of depression (S-M)		
14		<p>0 I don't feel that I look worse than usual.</p> <p>1 I'm worried that I look old and unattractive.</p> <p>2 I know that there has been significant changes in my appearance, which make me unattractive.</p> <p>3 I know that I look ugly</p>
15		<p>0 I can work just as well, as before.</p> <p>1 I need to make extra effort to start doing something.</p> <p>2 It's hard for me to make myself do anything.</p> <p>3 I can't do any work.</p>
16		<p>0 I sleep as good, as before.</p> <p>1 Now I'm sleeping worse, than before.</p> <p>2 I wake up 1-2 hours earlier and I find it hard to sleep</p>

		again. 3 I wake up several hours earlier than usual and can't fall asleep.
17		0 I don't get tired more, than usual. 1 Now I get tired faster, than before. 2 I almost get tired of everything I do. 3 I can't do anything, because of fatigue.
18		0 My appetite is no worse than usual. 1 My appetite has become worse, than before. 2 My appetite is much worse now. 3 I don't have any appetite.
19		0 I've not lost weight or weight loss was minor recently. 1 I lost more than 2 kg recently. 2 I lost more than 5 kg. 3 I lost more than 7 kg. I knowingly try to lose weight and eat less (check - stitch). Yes_____ No_____
20		0 I'm worried about my health not more, than usual. 1 I worry about my physical health, such as pain, indigestion, constipation, etc. 2 I am very concerned about my physical condition, and I find it hard to think about anything else. 3 I'm so concerned about my physical condition that I can't think about anything else.
21		0 I've noticed changes in my interest in sex. 1 I worry less about sex problems than before. 2 Now I am much less interested in sexual relations, than ever before. 3 I completely lost libido interest.

Processing of results of answers.

Each point of a scale is estimated from 0 to 3 according to increase of weight of a symptom.

The score is equal from 0 to 62 and decreases according to improvement of a state.

Results of test are interpreted as follows: 0-9 — lack of depressive symptoms; 10-15 — slight depression (sub-depression); 16-19 — moderate depression;

20-29 — the expressed depression (average weight); 30-63 — heavy depression.

Magneto laser colors MIT test.

We offered the magneto laser color test of determination of individual relaxation frequency and an assessment of a psychophysiological state by the comfort of psychophysical feelings of color, geometry (form) and frequency of a blinking of light when performing magneto laser influence. For its carrying out in cosmetology salons the device MIT-11 can be used.

For its carrying out the magneto laser applicator of a red range of range is installed in a zone between eyebrows of arches (eyes are closed), the magneto laser applicator of an infrared range of range is installed in a zone of a big occipital opening. The intensity of a magnetic field in an impulse makes 30 Mt. The polarity of a magnetic field - southern. The power of an optical stream makes 50 mW. The range of determination of individual therapeutic frequency gets out in one of the working rhythms of cerebral cortex.

For determination of the individual frequency of a relaxation and performance of an assessment of a psychophysical condition of clients range alpha, and beta rhythms of fluctuation of an electric signal of EEG of a cerebral cortex gets out.

The alpha rhythm has the frequency of 8÷13 Hz. It reflects a condition of rest and is registered at the person who is in a condition of wakefulness, but blindly.

The beta rhythm has the frequency of 14÷30 Hz but reflects a condition of uneasiness, concern, depression and use of the calming drugs.

The step of change of frequency, at the determination of the individual frequency of a relaxation, makes: in the range - 8,0÷9,9 of Hz - 0,1 Hz, in the range of 10,0÷30,0 Hz - 1 Hz. Influence time at each frequency is 2-3 seconds.

In the course of change of frequency of repetition of impulses, practically all patients have psychophysical a feeling of change of color and comfort of the feeling of blinking of light and color scale. For the specific patie frequency of comfortable psychophysical feeling of change of color, a contour of figures and of a blinking of light is fixed. These parameters are brought in the table.

Indicators of comfortable psychophysical feeling

Indicators									
Relaxation frequency	8-9	9-10	10-11	11-12	12-13	13-15	15-20	20-25	25-30
Color	1	2	3	4	5	6	7	8	9

Interpretation of individual color of a relaxation

Red color – manifestation of the latent depression, chronic fatigue, unconscious sensation of fear, lack of emotions and sexual relations, the hypofunctional condition of the cardiovascular system, atonia of muscular system, a decrease in neuron excitability of fabric, oxygen starvation.

Orange color – manifestations similarly red, but to a lesser extent. Also characterizes decrease in will and desire to make the decision, digestion violation, the accelerated aging process, microcirculation is broken.

Yellow color - a manifestation of the latent depression, the chronic fatigue underestimated self-assessments and decrease in memory. Also characterizes violation of release of bile and digestion, the hypofunctional condition of a thyroid gland.

Green color – manifestation of unbalance, roughness, aggression, alarm, fear of the closed space, a hyper-functional condition of the cardiovascular system and bronchopulmonary system.

Blue color – reflects a condition of stress, alarm, the lowered libido and frigidity, headaches of migraine of this kind, excess of toxins in an organism, an elevated pressure, violation of work of liver, violation of PMS.

Dark blue color - reflects a condition of possible hysteria, vigilance, sleeplessness and violation of rhythms, an excess of toxins in an

organism, an elevated pressure, violation of work of liver, violation of an aerobic exchange.

Violet color - reflects a condition of possible loss of belief, despair, depression and chronic fatigue.

Black color – symbolizes motivated use of force, abilities to anticipation, destructiveness, use of force as a manifestation of weakness and egoism, suppression, depression, emptiness, abstention and reserve. The person preferring him seeks to hide the inner world from people around and seeks to hold the power or influence by all means. On the other hand, this person feels the need for external control.

Grey color - reflects a reliability status and safety, absence of fear, intellectuality and modesty, the feeling of advantage, conservatism, and practicality, the tendency to the manifestation of grief is developed.

10. White color - reflects a condition of devotion, an increased feeling of justice, impartiality, ease in decision-making. The disappointment in ideals, manifestation of stiffness and boredom is possible.

For psychophysiological correction of disturbing and depressive frustration (anxiety, the latent depression and a syndrome of chronic fatigue) or carrying out the procedure of a relaxation of clients of cosmetology salons we are developed simple, but rather effective techniques.

1. Magneto laser correction.

The device МИТ-11 (НМЦ «МЕДИНТЕХ», Kiev) with two magneto laser applicators is used to carrying out procedures. The applicator of a red range (0,67 microns), the applicator of blue (infrared) range of (0,45 or 0,808 microns) with an integrated power of optical stream no more than 35 MW and intensity of a magnetic field about 20 мТл. Time of one procedure makes not less than 25 minutes (comfortable feeling). Procedures are carried out before cosmetology procedures.

During the stop of procedures in the magneto laser applicator of a red luminescence was installed on the between eyebrow of arches zone, an infrared luminescence zone - on a zone of a big occipital opening was established.

Modulation of a magnetic field and the optical stream was carried out synchronously. The choice of frequency occurs by a comfortable individual feeling of frequency in the working range an alpha or a beta rhythm (8-30 Hz). For determination of the individual frequency of a relaxation. The infrared magneto laser applicator was installed on a medulla projection (a zone of a big occipital opening), red – on a projection of a frontal zone of a maxillary sinus (nose bridges are 1-2 cm higher), eyes at the client during the procedure are closed. Initial frequency of modulation was established 8 Hz and further it is increased from 1 Hz to 30 Hz. Influence time at each frequency made about 5 seconds. At the change of frequency, clients have a change of psychophysical feeling of color, a look and the geometrical sizes of the visualized figures. The frequency with which the client feels feeling of the maximum comfort which then was used for carrying out procedure of a relaxation or psychophysiological correction was defined by the method of a poll of subjective feelings is disturbing depressive frustration.

In addition during the procedure of endonasal breath by singlet-oxygen mix with use of the device MIT-C is carried out.

2. Microcurrent correction.

The device MBT-01 MT or MBT-01 МТФ (НМЦ «МЕДИНТЕХ», Kiev) with two electrodes which are established 1 cm below than mastoidal shoots was used to carrying out procedures. For the performance of procedure the bipolar signal, the procedure two mode gets out, the current of 900 mk, sensitivity is established until emergence of easy feelings of vibration or a pricking, time of procedure of 25 minutes.

Procedures are carried out before the performance of cosmetology procedures.

Also, during microcurrent procedure correction is carried out endonasal breath by singlet-oxygen mix with use of the device MIT-C.

REFERENCES IN ORYGINAL

1. Чухраев, Н.В. Применение вакуумного массажа в профилактических и лечебных целях. / Н.В. Чухраев., И.З. Самосюк., Л.И. Фисенко. - К.: АО «УКРПРОФЗДРАВНИЦА», 1998-с.56.
2. Самосюк, И.З. Терапия ультразвуковыми волнами (низко и высокочастотная ультразвуковая терапия) / И.З. Самосюк., Г.Е. Шимков., Н.В. Чухраев и др. Научно-практические материалы по применению физических факторов в клинической и курортной практике. Вып.2. – К.: НМЦ «МЕДИНТЕХ», 1998.- 191 с.
3. Самосюк, И.З. Терапия магнитными полями /И.З. Самосюк., Н.В. Чухраев., В.В. Парамончик и др. Научно-практические материалы. Вып.3. – К.: НМЦ «МЕДИНТЕХ», 2000. –240 с.
4. Самосюк, И.З. Терапия лазерным сканирующим лучом /И.З. Самосюк., Г.Е. Шимков., Н.В. Чухраев. Методические рекомендации по применению лазерных сканирующих устройств. К.: ЗАО «МЕДИНТЕХ», 2000. – 58 с.
5. Самосюк, И.З. Магнитолазероультразвуковая терапия. /И.З. Самосюк, Н.В. Чухраев, В.Г. Мясников, Н.И. Самосюк. Научно-практические материалы. Вып.4. – М-К.: НМЦ «МЕДИНТЕХ», 2001, 202 с.
6. Самосюк, И.З. Терапия ультразвуковыми волнами. /И.З. Самосюк, Г.Е. Шимков, Н.В. Чухраев, Е.Э. Лавриненко, Н.И. Самосюк, Е.В. Парамончик. Издание второе дополнительное. К.: НМЦ «МЕДИНТЕХ», 2003, 173 с.
7. Самосюк, И.З. Физические методы лечения и медицинской реабилитации больных и инвалидов. /И.З. Самосюк, Н.В. Чухраев, С.Т. Зубкова, Н.И. Самосюк, Г.Е. Шимков.- К.: «Здоровья» 2004., 624 с.

8. Самосюк, И.З. Электротерапия и электропунктура в медицинской реабилитации, физиотерапии и курортологии. /И.З. Самосюк., Н.В. Чухраев., Н.И. Самосюк., Е.Н. Чухраева. – К.: НМЦ «Мединтех», 2005.- 292 с.
9. Леонов, Б.И. Низкоинтенсивная резонансная физиотерапия. Способы и средства. /Б.И. Леонов, И.З. Самосюк, Н.В. Чухраев, Ю.А. Артюхов. –М.: НМЦ «Мединтех»,– 2006. 148с.
10. Луговской, А.Ф. Ультразвуковая кавитация в современных технологиях. / А.Ф. Луговской, Н.В.Чухраев. - К.: «НМЦ Мединтех», 2011, 245 с.
11. Чухраев, Н.В. Аппаратные методы в косметологии. Программы ухода за телом. /Н.В.Чухраев, Е.Н. Чухраева, А.П. Терещенко, М.А. Гунько, А.В. Униченко. /под. ред. Чухраева Н.В., К.: НМЦ «МЕДИНТЕХ», 2015.- 164 с.
12. Самосюк И.З. Вакуумный массаж. /И.З. Самосюк, Н.В. Чухраев, А.П. Терещенко, М.А. Гунько. К.: НМЦ «МЕДИНТЕХ», 2015.- 180 с.
13. Чухраева Е.Н. Аппаратные методы в косметологии. Программы ухода за лицом. /Е.Н. Чухраева, А.П. Терещенко, М.А. Гунько, А.В. Униченко. /под. ред. Н.В.Чухраева, К.: НМЦ «МЕДИНТЕХ», 2015.- 164 с.
14. Чухраев Н.В. Многофункциональная лазерная терапия больных и инвалидов /Чухраев Н.В., Чухраева Е.Н., Буцкая Л.В., Гунько М.А., Владимиров А.А. Под общей редакцией: член кор. НАН Украины Забулонова Ю.Л., проф. Владимирова А.А.– К., НМЦ «МЕДИНТЕХ», 2015. – 317 с.
15. Automated system with use the external storage medium, are based on poly level of assessment and low intensity physio correction of the functional state of the operators. /Chuhrayeva O.N., Butskaya L.V., Chuhrayev N.V., Zelezko O.V., Pachevskiy I.S, Butskiy V.V.

//Материалы VI Международного конгресса «Слабые и сверхслабые поля и излучения в биологии и медицине» -С.-П.-2012. С.117–119.

16. Чухраев Н.В. О действии низкоинтенсивного электромагнитного излучения видимого диапазона спектра и магнитного поля на восстановление поврежденных периферических нервов экспериментальных животных /Н.В.Чухраев, А.М.Коробов, Н.Ф. Посохов, О.В.Горбунов //Материалы XXXXI Международной научно-практической конференции. Применение лазеров в медицине и биологии. -2014, С.41-42.

17. Чухраев Н.В. Многофакторный подход в психофизиологической коррекции тревожно-депрессивных расстройств у больных с хроническими заболеваниями /Н.В.Чухраев, А.В.Униченко, А.А.Владимиров, В.И.Левковская //Фотобіологія та фотомедицина //Міжнародний науково-практичний журнал. -2014, Т.ХІІ, № 3, 4 С.35-40.

18. Чухраев, Н.В. Коррекция тревожно-депрессивных расстройств на основе латеральной импульсной микрополяризации /Н.В.Чухраев, А.А.Владимиров. //Научные труды VII Международного конгресса «Слабые и сверхслабые поля и излучения в биологии и медицине». -2015, С.253-254.

19. Чухраев, Н.В. Применение транскраниальной физиотерапии для коррекции тревожно депрессивных расстройств //Н.В.Чухраев, А.А.Владимиров //Всероссийская научно-практическая междисциплинарная конференция с международным участием 14–16 октября 2015 года, М.: «Реабилитация и профилактика–2015» (в медицине и психологии). С.207-209.

20. Chuhraev N. V., Zukow W. The algorithm for calculating the parameters of a radiation oncology correlation-extreme recognition

system (CERS) processes based on the analysis of the infrared spectrum of blood. Journal of Education, Health and Sport.2015;5(6) 225-240.

21. Chuhraev N.V, Vladimirov A. A, Levkovskaya V.I, Zukow W. Psychophysiological correction anxious depressive disorders in patients dorsopathy. Journal of Education, Health and Sport. 2015;5(6): 273-280.

22. Zabulonov Y., Chukhraiyeva O., Vladimirov A., Chukhraiyeve M., Zukow W. Diabetic peripheral angiopathy treatment using a multi-laser therapy device. Journal of Education, Health and Sport. 2015; 5(10): 227-233.

23. Патент на промисловий зразок № 3663 Україна. “Вібратор для ультразвукової терапії”. /М.В. Чухраєв, І.З. Самосюк, В.О. Зенченко. Опубл. 15.09.2000. Бюл.№4.

24. Свидетельство на полезную модель № 19466. “Прибор для резонансной низкоинтенсивной физиотерапии с использованием внешнего носителя информации”. /Н.В. Чухраев. Зарегистр. г. Москва, 10 сентября 2001 г.

25. Патент на промисловий зразок № 4602 Україна. “Прилад для низькоінтенсивної фізіотерапії”. /М.В. Чухраєв, І.З. Самосюк, О.І. Писанко, О.М. Чухраєва, Н.І. Самосюк. Опубл. 15.02.2001. Бюл.№1.

26. Деклараційний патент на корисну модель № 989 Україна. “Прилад для резонансної низько інтенсивної фізіотерапії з використанням зовнішнього носія інформації”. /І.З. Самосюк, М.В. Чухраєв, Н.І. Самосюк, О.М. Чухраєва, О.І.Писанко. Опубл. 16.07.2001. Бюл.№6.

27. Патент на корисну модель № 62213. Україна. “Спосіб оцінки і коригування функціонального стану людини». /Самосюк І.З., Самосюк Н.І., Чухраєв М.В., Чухраєва О.М., Железко О.В., Пачевський І.С. Зареєстровано 10.08.2011. Бюл. № 15.

REFERENCES IN TRANSLITERATION

1. Chuhraev, N.V. Primenenie vakuumnogo massazha v profilakticheskikh i lechebnyh celjah. / N.V. Chuhraev., I.Z. Samosjuk., L.I. Fisenko. - K.: AO «UKRPROFZDRAVNICA», 1998-s.56.
2. Samosjuk, I.Z. Terapija ul'trazvukovymi volnami (nizko i vysokochastotnaja ul'trazvukovaja terapija) / I.Z. Samosjuk., G.E. Shimkov., N.V. Chuhraev i dr. Nauchno-prakticheskie materialy po primeneniju fizicheskikh faktorov v klinicheskoi i kurortnoj praktike. Vyp.2. – K.: NMC «MEDINTEH», 1998.- 191 s.
3. Samosjuk, I.Z. Terapija magnitnymi poljami /I.Z. Samosjuk., N.V. Chuhraev., V.V. Paramonchik i dr. Nauchno-prakticheskie materialy. Vyp.3. – K.: NMC «MEDINTEH», 2000. –240 s.
4. Samosjuk, I.Z. Terapija lazernym skanirujushhim luchom /I.Z. Samosjuk., G.E. Shimkov., N.V. Chuhraev. Metodicheskie rekomendacii po primeneniju lazernyh skanirujushhih ustrojstv. K.: ZAO «MEDINTEH», 2000. – 58 s.
5. Samosjuk, I.Z. Magnitolazeroul'trazvukovaja terapija. /I.Z. Samosjuk, N.V. Chuhraev, V.G. Mjasnikov, N.I. Samosjuk. Nauchno-prakticheskie materialy. Vyp.4. – M-K.: NMC «MEDINTEH», 2001, 202 s.
6. Samosjuk, I.Z. Terapija ul'trazvukovymi volnami. /I.Z. Samosjuk, G.E. Shimkov, N.V. Chuhraev, E.Je. Lavrinenko, N.I. Samosjuk, E.V. Paramonchik. Izdanie vtoroje dopolnitel'noe. K.: NMC «MEDINTEH», 2003, 173 s.

7. Samosjuk, I.Z. Fizicheskie metody lechenija i medicinskoj rehabilitacii bol'nyh i invalidov. /I.Z. Samosjuk, N.V. Chuhraev, S.T. Zubkova, N.I. Samosjuk, G.E. Shimkov.- K.: «Zdorov'ja» 2004., 624 s.
8. Samosjuk, I.Z. Jelektroterapija i jelektropunktura v medicinskoj rehabilitacii, fizioterapii i kurortologii. /I.Z. Samosjuk., N.V. Chuhraev., N.I. Samosjuk., E.N. Chuhraeva. – K.: NMC «Medinteh», 2005.- 292 s.
9. Leonov, B.I. Nizkointensivnaja rezonansnaja fizioterapija. Sposoby i sredstva. /B.I. Leonov, I.Z. Samosjuk, N.V. Chuhraev, Ju.A. Artjuhov. –M.: NMC «Medinteh»,– 2006. 148s.
10. Lugovskoj, A.F. Ul'trazvukovaja kavitacija v sovremennyh tehnologijah. / A.F. Lugovskoj, N.V.Chuhraev. - K.: «NMC Medinteh», 2011, 245 s.
11. Chuhraev, N.V. Apparatnye metody v kosmetologii. Programmy uhoda za telom. /N.V.Chuhraev, E.N. Chuhraeva, A.P. Tereshhenko, M.A. Gun'ko, A.V. Unichenko. /pod. red. Chuhraeva N.V., K.: NMC «MEDINTEH», 2015.- 164 s.
12. Samosjuk I.Z. Vakuumnyj massazh. /I.Z. Samosjuk, N.V. Chuhraev, A.P. Tereshhenko, M.A. Gun'ko. K.: NMC «MEDINTEH», 2015.- 180 s.
13. Chuhraeva E.N. Apparatnye metody v kosmetologii. Programmy uhoda za licom. /E.N. Chuhraeva, A.P. Tereshhenko, M.A. Gun'ko, A.V. Unichenko. /pod. red. N.V.Chuhraeva, K.: NMC «MEDINTEH», 2015.- 164 s.
14. Chuhraev N.V. Mnogofunkcional'naja lazernaja terapija bol'nyh i invalidov /Chuhraev N.V., Chuhraeva E.N., Buckaja L.V., Gun'ko M.A., Vladimirov A.A. Pod obshhej redakciej: chlen kor. NAN Ukrainy Zabulonova Ju.L., prof. Vladimirova A.A.– K., NMC «MEDINTEH», 2015. – 317 c.
15. Automated system with use the external storage medium, are based on poly level of assessment and low intensity physio correction of the

functional state of the operators. /Shuhrayeva O.N., Butskaya L.V., Chuhrayev N.V., Zelezko O.V., Pachevskiy I.S, Butskiy V.V. //Materialy VI Mezhdunarodnogo kongressa «Slabye i sverhslabye polja i izluchenija v biologii i medicine» -S-P.-2012. S.117–119.

16. Chuhraev N.V. O dejstvii nizkointensivnogo jelektromagnitnogo izluchenija vidimogo diapazona spektra i magnitnogo polja na vosstanovlenie povrezhdennyh perifericheskikh nervov jeksperimental'nyh zhivotnyh /N.V.Chuhraev, A.M.Korobov, N.F. Posohov, O.V.Gorbunov //Materialy XXXHI Mezhdunarodnoj nauchno-prakticheskoj konferencii. Primenenie lazerov v medicine i biologii. -2014, S.41-42.

17. Chuhraev N.V. Mnogofaktornyj podhod v psihofiziologicheskoj korrekcii trevozhno-depressivnyh rasstrojstv u bol'nyh s hronicheskimi zabolevanijami /N.V.Chuhraev, A.V.Unichenko, A.A.Vladimirov, V.I.Levkovskaja //Fotobiologija ta fotomedicina //Mizhnarodnij naukovo-praktichnij zhurnal. -2014, T.HII, # 3, 4 S.35-40.

18. Chuhraev, N.V. Korrekcija trevozhno-depressivnyh rasstrojstv na osnove lateral'noj impul'snoj mikropoljarizacii /N.V.Chuhraev, A.A.Vladimirov. //Nauchnye trudy VII Mezhdunarodnogo kongressa «Slabye i sverhslabye polja i izluchenija v biologii i medicine». -2015, S.253-254.

19. Chuhraev, N.V. Primenenie transkranial'noj fizioterapii dlja korrekcii trevozhno depressivnyh rasstrojstv //N.V.Chuhraev, A.A.Vladimirov //Vserossijskaja nauchno-prakticheskaja mezhdisciplinarnaja konferencija s mezhdunarodnym uchastiem 14–16 oktjabrja 2015 goda, M.: «Reabilitacija i profilaktika–2015» (v medicine i psihologii). S.207-209.

20. Chuhraev N. V., Zukow W. The algorithm for calculating the parameters of a radiation oncology correlation-extreme recognition

system (CERS) processes based on the analysis of the infrared spectrum of blood. Journal of Education, Health and Sport.2015;5(6) 225-240.

21. Chuhraev N.V, Vladimirov A. A, Levkovskaya V.I, Zukow W. Psychophysiological correction anxious depressive disorders in patients dorsopathy. Journal of Education, Health and Sport. 2015;5(6): 273-280.

22. Zabulonov Y., Chukhraiyeva O., Vladimirov A., Chukhraiyeve M., Zukow W. Diabetic peripheral angiopathy treatment using a multi-laser therapy device. Journal of Education, Health and Sport. 2015; 5(10): 227-233.

23. Patent na promislovij zrazok # 3663 Ukraïna. "Vibrator dlja ul'trazvukovoï terapii". /M.V. Chuhraev, I.Z. Samosjuk, V.O. Zenchenko. Opubl. 15.09.2000. Bjul.#4.

24. Svidetel'stvo na poleznuju model' # 19466. "Pribor dlja rezonansnoj niz'kointensivnoj fizioterapii s ispol'zovaniem vneshnego nositelja informacii". /N.V. Chuhraev. Zaregistr. g. Moskva, 10 sentjabrja 2001 g.

25. Patent na promislovij zrazok # 4602 Ukraïna. "Prilad dlja niz'kointensivnoï fizioterapii". /M.V. Chuhraev, I.Z. Samosjuk, O.I. Pisanko, O.M. Chuhraeva, N.I. Samosjuk. Opubl. 15.02.2001. Bjul.#1.

26. Deklaracijnij patent na korisnu model' # 989 Ukraïna. "Prilad dlja rezonansnoï niz'ko intensivnoï fizioterapii z vikoristannjam zovnishn'ogo nosija informacii". /I.Z. Samosjuk, M.V. Chuhraev, N.I. Samosjuk, O.M. Chuhraeva, O.I.Pisanko. Opubl. 16.07.2001. Bjul.#6.

27. Patent na korisnu model' # 62213. Ukraïna. "Sposib ocinki i koriguvannja funkcional'nogo stanu ljudini». /Samosjuk I.Z., Samosjuk N.I., Chuhraev M.V., Chuhraeva O.M., Zhelezko O.V., Pachevs'kij I.S. Zareestrovano 10.08.2011. Bjul. # 15.

МИТ-ЭФ2 Electroporation



The device for electrotreatment "МИТ-ЭФ2" is used to performance of various options of electro procedures by pulse or direct electric current: including an electrophoresis, ionophoresis, an elektroporation, electroporation fatty tissue, an electrodream, micropolarization at depressively disturbing frustration and electro-

frequency therapy.

Application of the pulse mode of influence at physiological frequencies provides also:

- to execute along with an electrophoresis electro frequency therapy by Foll's currents;
- to strengthen the action of preparations due to specific, resonant action of electric current.

Use of the device most effectively when performing procedures:

- correction of a figure, reduction of manifestation of cellulitis and lipolysis fatty tissue;
- electroporation, electrophoresis, and ionophoresis cosmetology preparations;
- psychophysiological correction it is disturbing depressive frustration;
- the increase of turgor of fabric.

“КОСМИТ”



on the body:

Ultrasound-phoresis

Cavitation

Vacuum

Muscle toning

on the face:

Ultrasound-peeling

Ultrasound-phoresis

Vacuum

Vibromassage

Microdermabrasion

Microcurrents

Photoactivation

Possibilities of the КОСМИТ devices:

- ultrasonic phoresis, ultrasonic lipolysis at bioresonant frequencies;
- vacuum magnet roller lymphatic drainage and anti-cellulite massage;
- ionophoresis and microcurrent influence (lifting, lipolysis, rejuvenation);
- photoactivation (photostimulation of a lipolysis, activation of biochemical processes, laser phoresis).

MBT-01



The device for vacuum massage "MBT-01" is intended for performance of vacuum and magnetovacuum massage due to the formation of local discharge in special nozzles.

Application of vacuum massage strengthens blood and lymph circulation, exchange and trophic processes in fabrics, positively influences a condition of the neuromuscular device, promotes a resorption of hems and solderings.

Under the additional agreement to the device the nozzle with a roller magnet which is carrying out at the same time a magnetotherapy and vacuum massage is delivered. The principle of action of a nozzle is based that when carrying out massage in a nozzle skin of problem zones is pulled in, making destruction of fatty capsules and removing their contents through lymphatic system and skin pores. Application of a roller magnet promotes increase in fluidity of fat, permeability of vessels and removal of hypostasis.

Use of the device most effectively for:

- improvements of blood supply for tired and problem skin;
- corrections of weight (treatment of cellulitis);
- muscular relaxation, restoration of forces after heavy physical or intellectual activity;
- rendering anti-depressive and antistress action.

Technical characteristics:

The created discharge in a nozzle — 0,4 A.D.

The quantity of variants of massage nozzles — 5 units.

МИТ-С



It is intended for preparation of singlet-oxygen mix, by activation of vapors of the distilled water by rigid ultra-violet radiation. The received mix can be used for preparation of singlet-oxygen cocktails or singlet-oxygen skins. Application of singlet-oxygen skins

expediently for prevention and treatment of various diseases connected with violation of oxidation-reduction processes in an organism and violation of anaerobic exchange. Existence in an organism of singlet-oxygen mix leads to increase in the quantity of free radicals and activation of biochemical processes in an organism.

Singlet-oxygen, it is desirable to use cocktails or skins within 2-3 minutes after their preparation.

The device is recommended to be used for treatment, prevention and rehabilitation of the following diseases:

- bronchopulmonary system (bronchial asthma, bronchitis);
- cardiovascular system (rheumatism, hypertensive illness, IBS, heart failure and insufficiency of blood circulation, etc.);
- neurologic diseases (pathology of vessels of a brain, diencephalic syndrome, vegeto-vascular dystonia, neuroses, asthenic states);
- diabetes;
- system diseases of a kolagenoz (rheumatism, etc.);
- immune diseases.

The device is intended for application in the centers of medical rehabilitation, sanatorium, medical and treatment-and-prophylactic, cosmetology and preschool institutions, phytobars.

МИТ-МТ (model MLT)



The device for physical therapy multipurpose "МИТ-МТ" (MJIT model) is used for the performance of zone physical therapy with use of a magnetic field, and optical stream red or infrared (blue) range ranges at resonant frequencies of bodies or systems.

The device is used for treatment of various diseases which cornerstone violation of immune and endocrine systems of local blood circulation, hypostases, pain syndromes, inflammatory processes and some

psychosomatic diseases, mainly neuroses and jet states which are especially complicated by a sleep disorder.

In surgical practice, the device is used in the postoperative period.

You use the device in medical, rehabilitation, sanatorium institutions.

TECHIVAL CHARACTERISTICS

Power of a light stream:

- of red 50 ± 10 mW*
- of infrared 50 ± 10 mW*
- of blue 20 ± 10 mW*

The maximum value of magnetic induction on an applicator 25-30 surface mT*.

The range of the established resonant frequencies of modulation of a light stream and magnetic field of 0-99 Hz with discontinuity of 0,1 Hz.

Power consumption is no more than 20 VA. The weight of the device is no more than 2,5 kg.

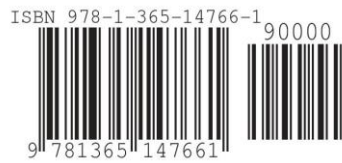
Overall dimensions of the device of 240x140x75 mm

200 s. Liczba znaków: 248 000 (ze streszczeniami i okładką). Liczba grafik: 70 x 1 000 znaków (ryczalt) = 70 000 znaków.
Razem: Liczba znaków: 318 000 (ze streszczeniami, okładką i grafikami) = 7,95 arkuszy wydawniczych.
200 p. Number of characters: 248 000 (with abstracts). Number of images: 70 x 1000 characters (lump sum) = 70 000 characters.
Total: Number of characters: 318 000 (with abstracts, summaries and graphics) = 7,95 sheet publications.

ISBN 9781365147661

DOI <http://dx.doi.org/10.5281/zenodo.53230>

ISBN 9781365147661



ISBN 9781365147661

