

USER'S GUIDE
for hardware-software complex
"Dianel-Micro" and dark field hemoscanning
software Dianel-Micro



MOSCOW
2008

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1.DESTINATION of “DIANEL-MICRO” MICROSCOPE

The microscope “DIANEL MICRO” is destined for supervision of preparations in a running and polarized light and also with using of the phase contrast method (if there are a dark field condenser and a contrast-phase unit – as an additional option).

It can be used to carry out the examinations in a polarized running light of liquid substances, such as water and other liquids, chemical solutions, biological substrates (blood, saliva, urine etc.); the goal of such examinations is a quality estimation of composition and homogeneity of a liquid medium: of chemical and biological inclusions and formation.

The microscope can be applied in different areas of investigations: in biology, in ecology, in different diagnostics laboratories, in laboratories of sanitary-and epidemiology stations and of veterinary, in different areas of science and technique.

The microscope can be equipped with a luminescence lighting device enabling to carry out the investigations of microstructure of different layers of biological objects' tissues in alive organs of different little experiment-animals directly and of tissues of organs after their removing from the organism.

It includes the microscope itself and a color video camera. If the customer desires, a digital camera can be supplied, which can be connected to computer directly, or an analog camera to be connected to a TV- set having an analog-digital signal transformer enabling a computer connection. Besides these, some cleaning sets and various use-up materials are available.

Thus, you can have from our company (at the most democratic prices) all the necessary things you will need for a full-value work with the dark-field microscope.

The equipment we offer to you, corresponds to the level of world brands and at any characteristics it even exceeds them.

2.APPEARANCE OF “DIANEL- MICRO” MICROSCOPE



3.COMPLET SETS AND TECHNICAL CHARACTERISTICS

Examination methods: light field, dark field

Magnification: 40x-1600x

Ocular –camera

Trinocular-camera with light streams adjusting

Capstan head: 4 sockets with turning from the observer

Objectives: Achromatic ones: 4x0,1 10x0,25 40x0,65 100x1,25 immersion oil

Wide-field oculars: 10-x, 16x

Linear field of vision: 18mm

Stage: rectangular with coordinate moving 140x140mm

Condenser: Abbe-condenser NA=1.25, with using of Keller-method in illuminator

Light filters: 2 changeable light filters

Illuminator: 20W/6V

Light source: halogen lamp with smooth brightness adjusting

Source of current: 220V/50-60Hz

Overall dimensions: 300x190x420mm

Weight: 7kg

Made in: Russia

With the complete set are delivered:

A digital camera, which is developed specially for being used in a microscope. The camera works excellent with all kinds of optical microscopes: with biologic microscopes, with tool-microscopes, with mono-and stereo-microscopes. The exact image of the observed object can be computer screen displayed. To the complete set of digital camera belongs a program enabling to take photo pictures and to do video recordings with the posterior processing of them.

Sensor: 1 300 000 pixel, 1/2" CMOS

MAX resolution (when being quiescent)-1280x1008

MAX resolution (when moving)-640x480, 30 sequences/s

Field of vision-Ø18 mm

Place of using – an ocular tube instead of an ocular

Image format-BMP, TIFF, JPG, PICT, PTL etc.

Exposition – auto

Exposure-auto

Interface: USB, hot plug and thrust, 1,5m-USB cable

System requirements: Windows 2000 / XP; USB cable

Software –USB 2.0 driver, a program

Complete set: ocular-camera, software (auto-installing guide, drivers, visualization, fixing and image processing program)

Connector (2 pc)

DIANEL-MICRO program

DIANEL-MICRO program characteristics:

Operation system Windows XP

Processor- from 1500MHz

Memory-from 512 Mb

Hard disk-from 60 GB

The program characteristics are full depended on the video-camera being used and on the degree of video-files compression. The higher these characteristics, the higher claims to the computer.

4.CONDITIONS OF OPERATION

In a room

Altitude: max. 2000 meters

Temperature: from 5°C to 40°C.

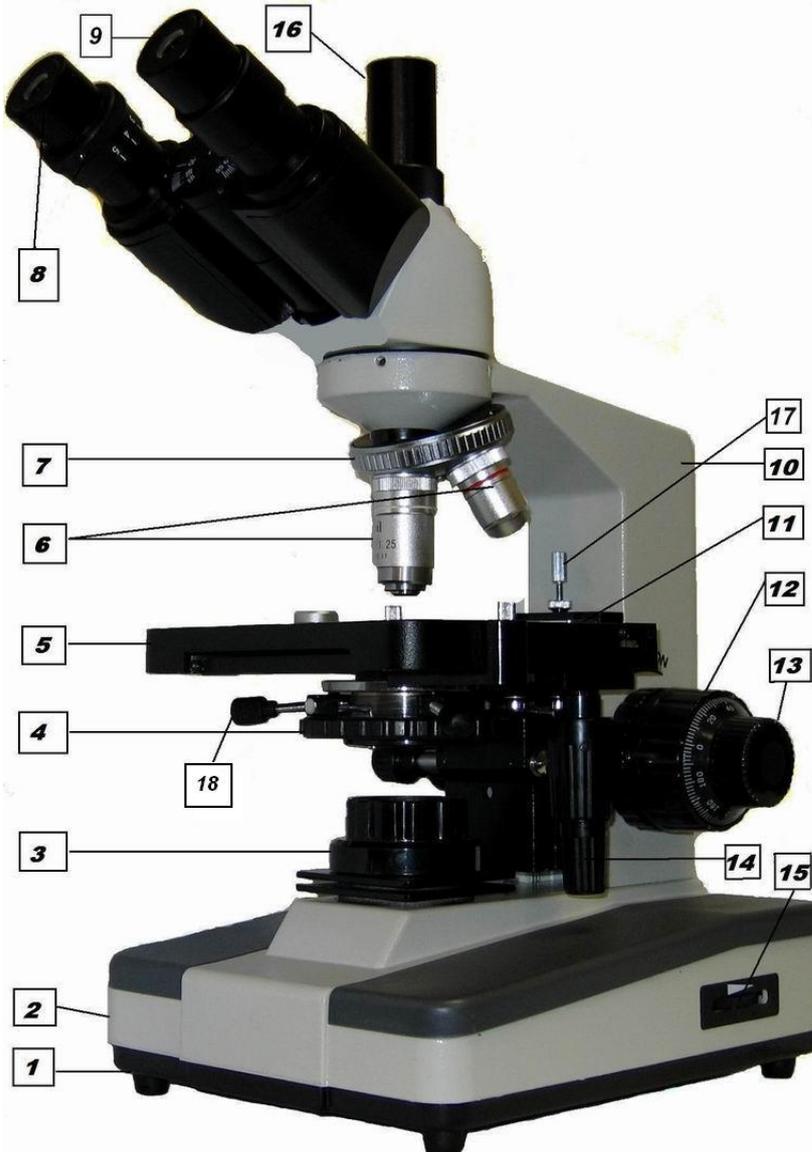
Maximum relative humidity: 80% at temperature till 30° C,; it is linear decreasing to 70% at 34°C , to 60% at 37°C ; to 50% at 40°C

The mains voltage instability should be not more than 10% of the nominal voltage

Pollution's category: 2 (according to IEC60664)

Electro-safety-category: II (according to IEC60664)

5.CONSTRUCTION OF MICROSCOPE



1. Substrate of microscope base
2. Microscope base with a switch
3. Illuminator
4. Iris diaphragm
5. Stage with a holder
6. Objectives
7. Capstan head
8. Left ocular

9. Right ocular
10. Support
11. Stage holder
12. Rough tuning knob
13. Fine tuning knob
14. Coaxial knob for moving preparations
15. Illumination level regulator's knob
16. Socket of video-photo-nozzle adapter

6. MICROSCOPE PARTS OPERATION PROCEDURE

1. Connect the network cable to the power supply and the cable of video camera to USB port of the computer

2. Put the object glass with preparation and with covering glass on the stage (5) and fix them

3. Set the power supply switch into the position "1"

When working with oculars

4. Set the dioptries of oculars (8,9) according to the eyesight strength of the operator and adjust the distance between the pupils so that the left and the right fields of vision coincide completely.

When working with video-camera

5. Insert the video-camera into the socket of video-photo-nozzle adapter (16)

6. Turn the knob of illumination level regulator (15) clockwise, making the illumination bright, and counter-clockwise, making it weaker.

7. Set the illuminator (3) on the wanted grade of illumination when turning it

8. With the knob of iris diaphragm condenser (4) adjust the width of light stream

9. With using of rough (12) and fine (13) adjusting knobs, put the stage into the position corresponding to the best visualization of preparation; that means, an optimal focusing should be done.

10. Moving the preparation with the object glass can be done with using of preparation moving knob(14).

Comment To have a normal focusing, one should see, that the condenser has the last upper position. If its position is deviating, the condenser should be fixed in the last upper position with fixing screws.

7. THERETICAL BASE OF THE METHOD

One of the new promising methods of organism's state diagnostics is **the scanning of an alive blood drop on a dark-field microscope.**

The blood is an alive tissue consisting of cell elements meal (red and white blood corpuscles and plates) in a protein solution called serum. It fulfils many functions which are important for human's life:

- It supplies each cell of organism with oxygen and nutrients;
- It removes the by-products of metabolism;
- It takes part in protective reactions;
- It supports homeostasis, i.e. the stability of internal environment of organism.

That's why the investigation of an alive blood drop, which is a distinctive mirror of organism, can give exceptional important information about the state of our health and about the possible disorders in the future

This method makes use of the fact, that the cells, contained in a separate drop of blood, continue to live approximately 20 minutes after this separate drop of blood is sampled. So it is possible, to look after the state of alive blood with the help of dark field microscope when working with a large magnifying. The dark field condenser allows the light to fall on the blood sample from aside. Thus the cells and different components are shining on the dark ground. It allows to see clearly the smallest parts, even smaller as a cell, which can not be seen with the help of a normal microscope. The background is dark because the light coming from the condenser runs not through the objective but aside of it. The alone visible light is the light reflected from aside and from the surface of the particles. The things we can see, are the shining boards of cells or bright objects (microorganisms, crystals etc.) on the black ground.

The alive blood image can be sent to the monitor of computer with the help of a digital television camera and can be caught and stored in a standard graphic format or recorded on a carrier, which the specialist and the examined patient can look through in the future. The clearness of such a method is more higher than when looking through the long columns with digits and text paragraphs.

The blood scanning in a dark field microscope **allows to estimate:**

1. Condition of erythrocytes, their mobility in plasma, degree of aggregation (sticking together to “coin columns”) and sludging (formation of disordered, continuous aggregation)
2. Condition of leukocytes characterizing the main properties of immune system by the magnitude of macrophages (in comparison with erythrocytes) and by the inclination to phagocytosis, which is good visible when scanning.
3. Condition of thrombocytes, inclination to the formation of thrombi and to the presence of aggregation as a factor predisposing to the formation of thrombi.
4. Condition of liquid component part of blood, i.e. of plasma, its degree of purity, presence or absence of microorganisms, of physiological (e.g., cholesterol) and (or) of pathological inclusions.

8. SCANNING TECHNIQUE

The main rule in conducting of blood sampling is a steadfast fulfilling of the rules of aseptics; it requires following things:

- non-permanent scarificators;
- alcohol-or sterile gauze drapes, sterile cotton;
- object-and covering glasses, single used;
- the room where the blood sampling is carried out should correspond to appointed sanitary—and hygiene standards

The best time for carrying out of investigations is the time before having meals or 2-3 hours after having meals. It is absolutely not required, that the patient has no meals from the early morning; but it is important to warn him, that he should not eat meat, fat food and cheese. Fruit, vegetables, juice, tea with lemon (but without sugar) are admissible!

Blood sampling. The finger of the patient must be handled with alcohol napkin and then dried out. If the alcohol remains on the skin, the picture of blood can be distorted: blood cells become coagulated, the integrity of cell walls can be broken, they look like echinocytes and in result the doctor can come to a wrong conclusion.

After the cover of the skin will be bricked, the finger of the examined patient should be turned down to the stage, because the drop of blood must hang down and flow down quietly. It is inadmissible, to press the finger phalanx as laboratory assistants use to do when conducting clinical blood tests in patient care institutions. The first drop of blood is not used for testing, it stays aside, but the second drop will be put on the subject glass, covered with covering glass and used for diagnostics immediately.

The subject glass should be placed on the stage and fixed with a holder. The center of preparation should be put into the field of vision and examination can begin. To prevent the artifacts, the edge of preparation should not be examined.

The scanning is recommended to be carried out in 2 stages. At the first stage the condition of patient’s blood is examined in its initial state. The other examination is conducted after the patient has taken preparations (dietary supplements) according to any clearly selected programs. An immutable rule for medical adviser should be goodwill, accurate asking, winning patient’s favor, exclusively correct formulation of initially detected pathology and of the posterior changes in blood.

At the first examination should be noted:

1. Date and time of carrying out of examination;
2. Surname, name of the patient;

3. Age, growth and weight;
4. Patient's complaints, the doctor finds when scanning;
5. Comments to blood scanning. Approximately it can be done in the following way: telling about the structure of blood, about the parity of plasma and cellular elements. Show in atlas, how it must look when being normal. An especial attention should be paid to decoding of the condition of plasma and its abnormalities, constantly comparing them with pictures in atlas. The first scanning lasts 4-6 minutes as the blood preparation is exposed to heating and drying when being scanned.

After carrying out of the 1-st stage the patient will be recommended to take dietary supplements of Coral club Company and of RBC (microhydrin, coral water, enzymes, antioxidants, etc.); the preparations will be selected according to the body weight of the patient. The repeated scanning starts 20-30 minutes later with recording on the same videocassette. The second scanning should last not more than 4-6 minutes, too. The doctor registers the changes in comparison with the first time. If in the second cut the aggregation and sludging of erythrocytes remain, what is a sign of a high degree of lipid exchange disorders and of enzymes-disorders, the patient is recommended to take an enzymes-capsule more and 200ml coral water with 10-20 drops of Crystal energy once again; then, 20 minutes later, the examination is conducted again. The patient should be convinced evidently, that the blood can be really clarified after taking of dietary supplements!

Positive results are: free moving erythrocytes in plasma, their normal, roundish form, increased sizes of macrophages (1,5-2 more than diameter of erythrocytes), increased activity of them, reduction of cholesterol and sugar stocks, dissolution of uric and ortho-phosphorus acid salts.

After that a conclusion must be formulated clearly; for example:

- a) Disordered lipid exchange, hypercholesterolemia, secondary enzymopathy, candidosis
- b) Endocrinopathy (after anamnesis collected in advance), inclination to formation of tumor cells, mastopathy. Immunological insufficiency.
- c) Prostate gland adenoma (if there is a conclusion of urologist), dysbacteriosis of gastrointestinal tract, in view of complaints, anamnesis, etc.). Secondary enzyme- insufficiency. Phosphorus-calcium exchange disorder.

9. BLOOD IN NORM AND IN PATHOLOGY

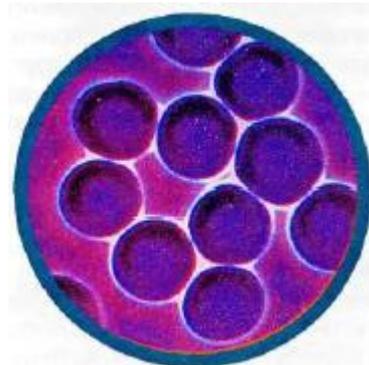
The blood is one of biological liquids of our organism; besides all the other functions, it fulfils transport functions: the blood supplies each organ, tissue, each cell with oxygen and with nutrients necessary for vital activity and removes from the organism carbonic gas and products of metabolism. The blood is a biological suspension consisting of a liquid part -of plasma, and of regular cell elements (leukocytes, erythrocytes, thrombocytes).

In norm the ratio between plasma and regular elements (haematocrit) is approximately 65-70 % of plasma and accordingly about 35 % of cells.

Erythrocytes

Erythrocytes are cells of blood fulfilling transport functions first of all: they transport oxygen and carbonic gas. The human's marrow produces approximately 2,5 million erythrocytes in minute. Erythrocytes' period of life is 120 days; then they are destroyed in the liver forming the bile necessary for the digestion process in thin intestines.

Healthy, large, not incorporated into "coin columns" and aggregations erythrocytes, which are surrounded by blood plasma in all the sides, can transport oxygen in optimal way. A sufficient satiation of cells with oxygen contributes to acceleration of metabolism; that enhances, in its turn, the energy



potential of organism. More important however is the fact, that owing to improved transport function the products of metabolism, which have to be removed from the organism, do not accumulate in the cells.

All the nutrients coming into the organism discharge various acids in process of digestion: proteins are disintegrating to amino acids, fats act as sources of fat acids, carbohydrates discharge hydrogen ions in process of digestion; the ions of hydrogen take part in the forming of acid radicals. Besides this, as result of physical work in muscular tissues pyruvic and lactic acids are worked out. After all, all these acids get into blood; because of this fact the membranes of erythrocytes, which initially have alkaline reaction, become “sticky” under the influence of acids in blood and join themselves to chains. The longer are these unstable “columns”, the more closely they stick together, the higher is the shift of acid-alkaline balance level to the sour part. This fact evidently illustrates the abilities of cells to transport oxygen depending on “sticking together”: the erythrocytes from the middle of the chain transport 13-17% only of the quantity of oxygen, connected by a single, “free” erythrocyte. Hence, when aggregating erythrocytes, the cells of our organism are in the condition of chronic oxygen insufficiency and it leads in its turn to sinking of exchange processes intensity. In organism are accumulated toxins and products of vital functions which have to be removed.

The size and outlines of cells, whitish centers and dark thin border around the more light center indicate the presence of this or that form of anemia (lack of vitamins of the group B, of iron or copper, of folic acid).

Leucocytes

Leucocytes are cells of immune system of organism; their task is the protection of organism from intrusion of any kind of external infection agents (bacteria, viruses etc.). There are several kinds of leucocytes; main of them are lymphocytes, producing antibodies when microorganisms are present in blood, and phagocytes (makophages), having the ability to change the form, to move actively and to guzzle foreign microorganisms.

The acid-alkaline balance influences the leukocytes appreciably. When the pH of blood moves to the sour party, the leukocytes decrease in sizes and become inactive; it is the sign, that the immune answer is decreased. If the acid-alkaline balance is normalized to the norm limits (pH=7,3), the leukocytes increase in sizes and become active; thus, the protecting powers of organism become stronger.

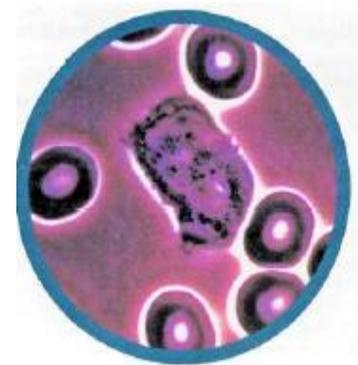
Thrombocytes

Thrombocytos (also called blood platelet) are little cells taking part in curtailing of blood. Exactly these cells stop bleeding in case of cuts so that a person does not bleed profusely to death in the slightest trauma. Being in blood, newborns thrombocytes look as massive congestions of the cells which become united when aging, but the mature thrombocytes are normally placed separately from each other.

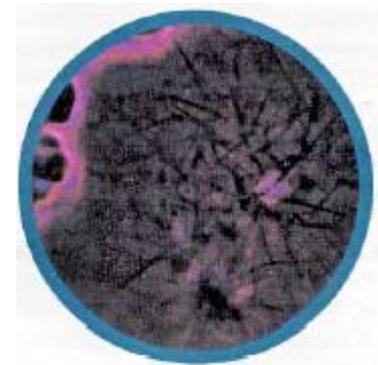
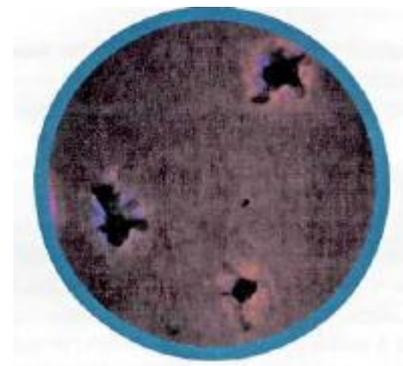
It is also admissible, that a small amount of them have their position near each other. However if there is a significant aggregation (so called sludge) in the blood, it is a bad sign, because it can lead to the formation of intravascular blood clots.

Lever stress(spicules of fibrogene)

Sometimes in the blood plasma one can see lines reminding a web or traces of skates on the ice; this is a fibrogene (predecessor of fibrin, one of blood curtailing factors). In norm



is



the fibrogene does not appear in plasma but its detection testifies that the liver has no time to complete the assimilation of fat or proteine molecules or it is not able to it. This phenomenon is not dangerous itself, because the liver, when passing the blood through itself many times, in the end will split proteins and fats into components the organism needs; after that the liver stress strips will disappear.

Toxins

In the modern world the people are constantly influenced by different toxins; their source is air containing waste products of industrial works and exhaust gases; preservatives contained in food stuffs, household and industrial chemicals, we have continually to deal with: washing means, various medicines. Unfortunately we can not avoid the influence of toxins; when entering the organism, toxins are accumulated in liver and in lipopexia. At night, when a normal alkaline level in blood is recovered, the liver drops the toxins into the blood. The kidneys filter them and then deduce them with urine.

Uric acid

The uric acid is an intermediate product of proteins' metabolism. As a rule, the uric acid in organism turns to urea and is removed with urine by kidneys.

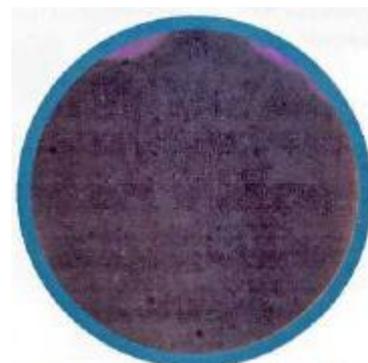
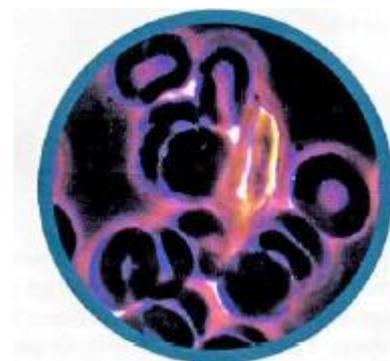
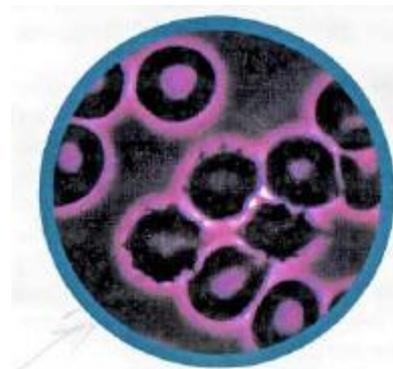
Howerer if this process is delayed, the uric acid and its salts (urates)not only become the reason of stones formation in kidneys, but they are accumulated in articular capsules of large and little joints, having a high affinity to articular surfaces; so they become the reason of phenomenon, the folk calls "deposition of salts" but its medical name is "gout". These crystals, as a rule, are similar to extremely thin and sharp splinters of beaten glass; mainly they are colorless or yellowish.

Phosphoric acid

The phosphoric acid crystallizes in organism and the reason can be aerated drinks when being drunk too much, especially the drinks produced with using of cola-nuts. The phosphoric acid is also generated in blood of people who have to do with heavy physical activities. It happens because when a person works hard, the organism loses fats and carbohydrates, which are "burnt" when receiving energy and during this process the phosphoric acid is produced. A number of food components (thickeners, fluffers, aroma means etc.) can also become the reason of phosphoric acid crystals formation. The phosphoric acid is dangerous for the organism because it acts as accumulator of calcium, i.e. it satiates itself with calcium, and, when the phosphoric acid is removed from the organism, the calcium is removed, too. If the phosphoric acid is detected in organism of a patient, we can say, that the patient loses his calcium. It results in calcium insufficiency and leads to development of osteoporosis.

Chilesis (microlipides)

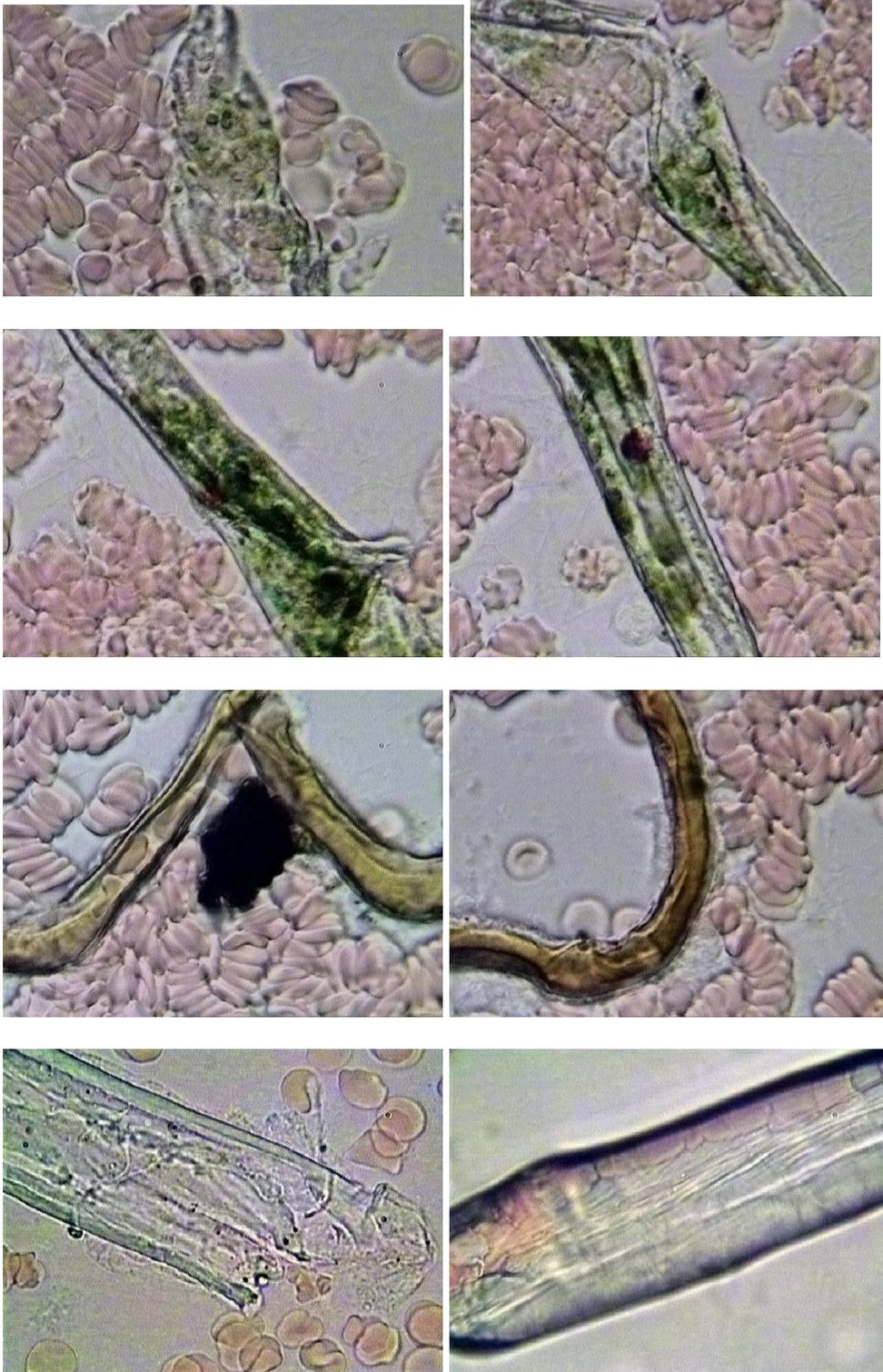
From time to time (especially after having meals) one can see little points in the blood which look as if they were dancing and trembling. These points are very small drops of lipids absorbed from the thin intestine. In organism they are used for very different purposes, including the formation of cholesterol; they are used as fuel to get energy, too. If the organism does not use

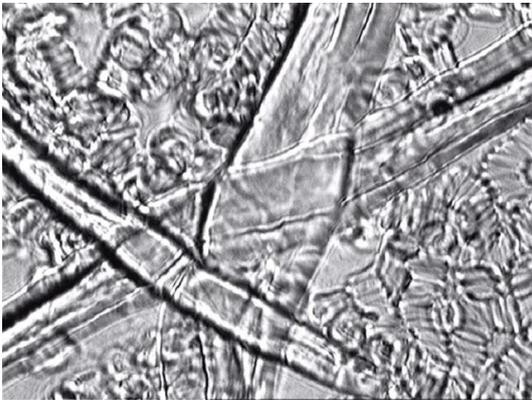
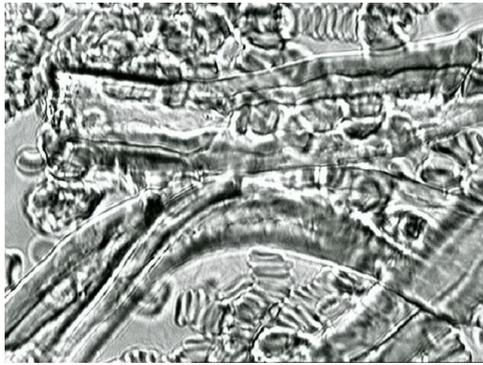
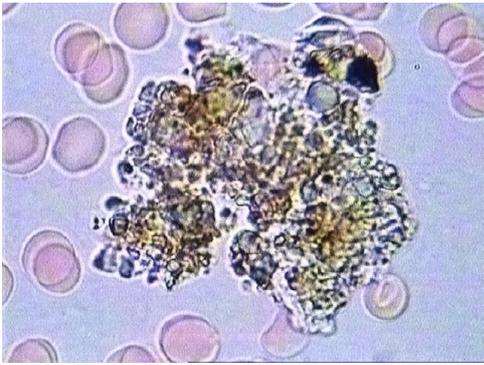


microlipids for own needs, they will be collected in tissues as fats or they take part in forming of vascular walls plaques in atherosclerotic changes. Sometimes the organism reacts on the presence of fat drops by occurrence of liver stress strips; these strips disappear easily after taking of enzymes.

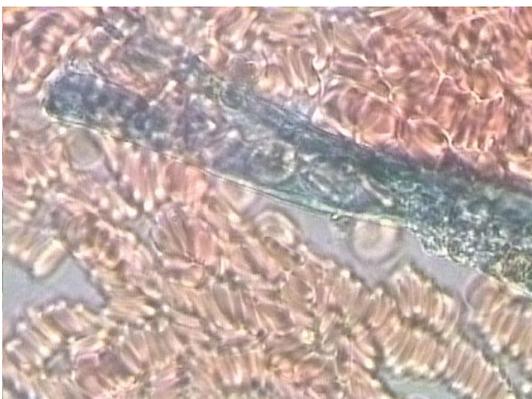
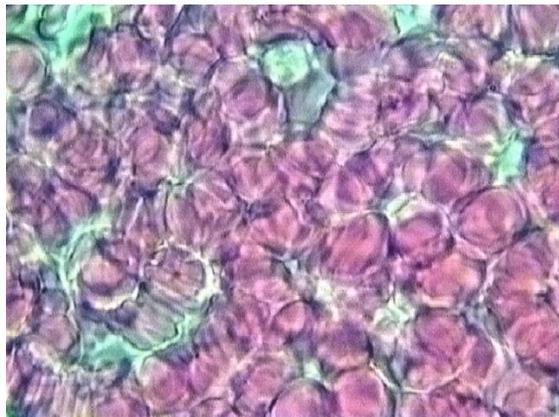
10. ILLUSTRATIONS

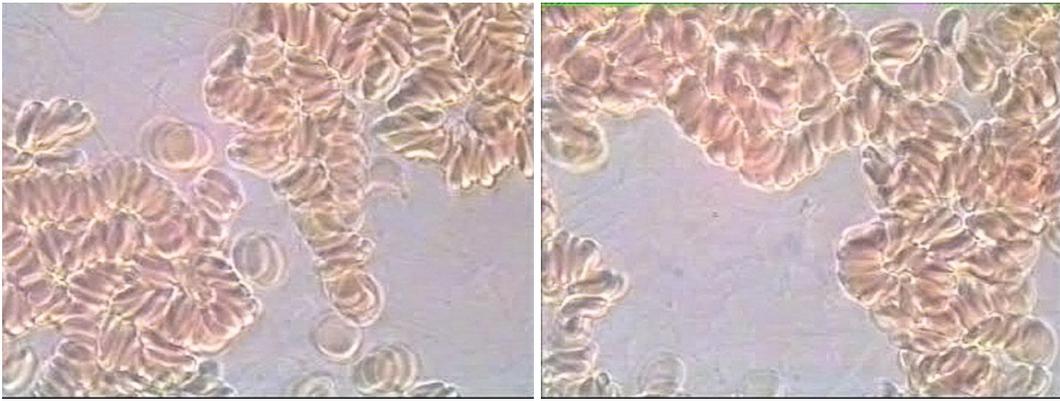
10.1. CHOLESTEROL IN BLOOD



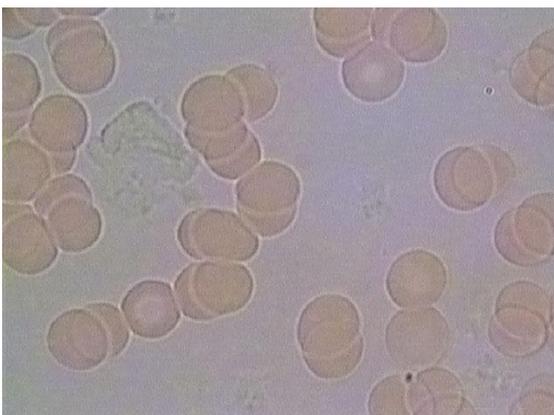
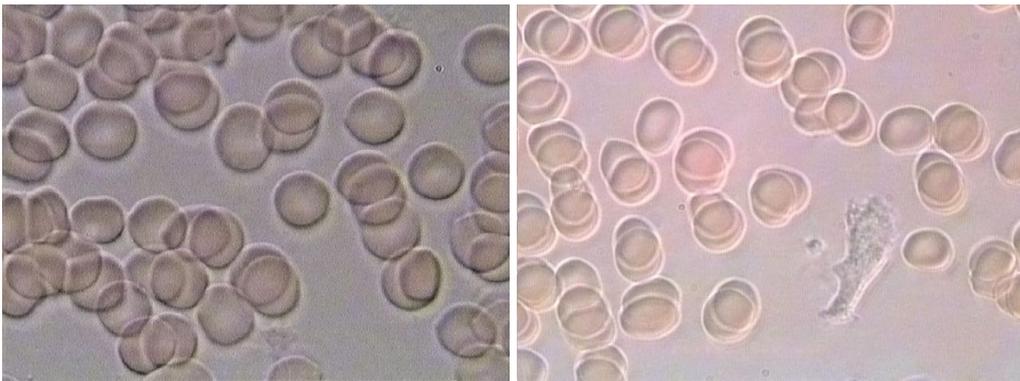
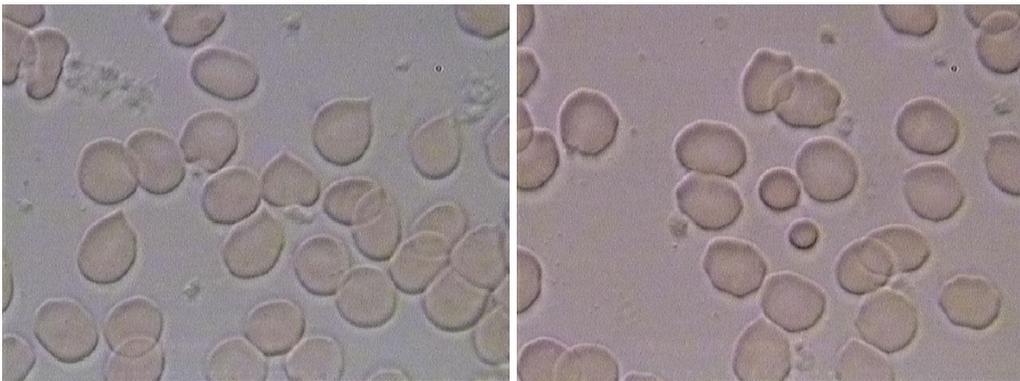


10.2.CLOTTING OF BLOOD





10.3.AFTER TAKING OF PREPARATIONS



10.4.MOVING OF LEUCOCYTES

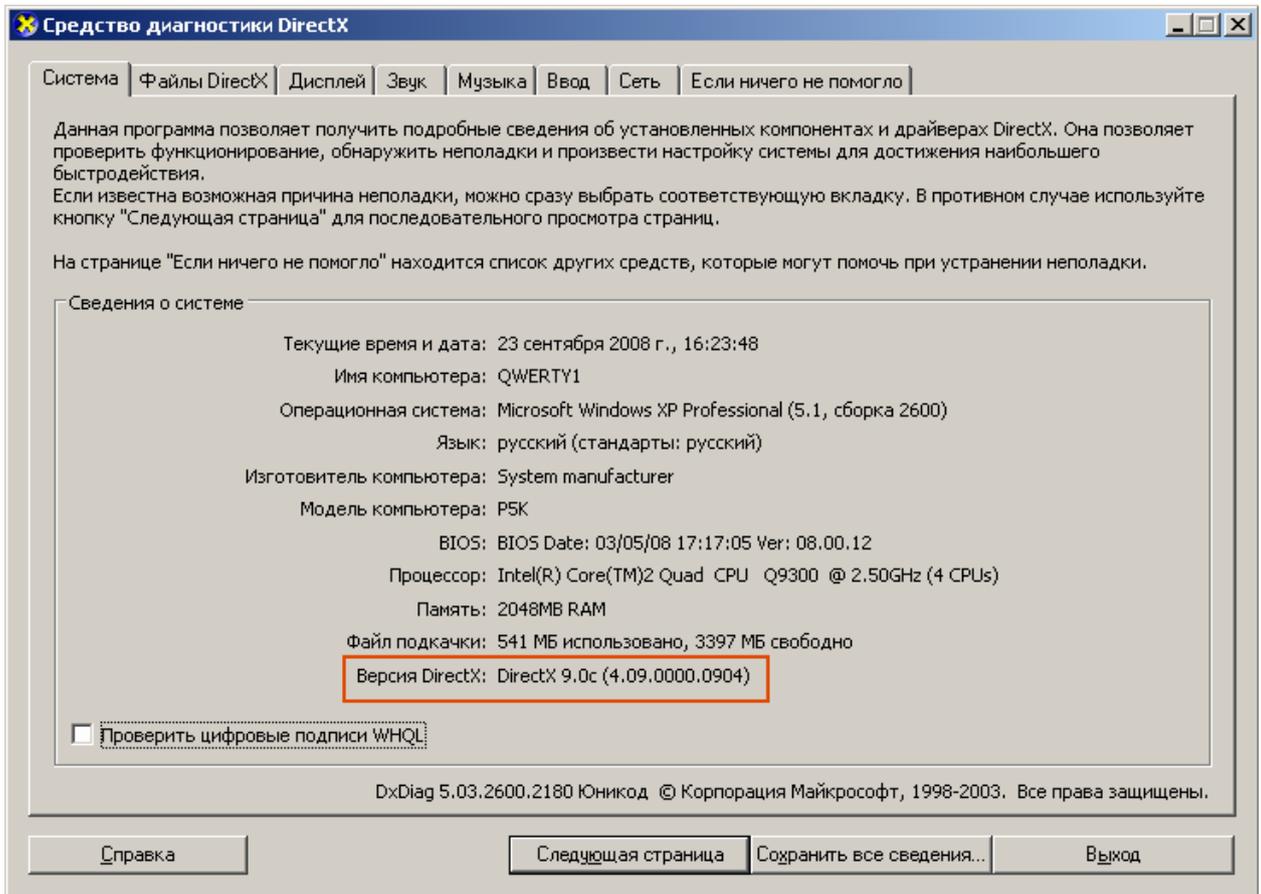


10.5.TARGET-CELLS-HYPOCHROMIC ERYTHROCYTES



11. INSTALLATION OF DIANEL-PROGRAM AND OF MYCROSCOPE DRIVERS

1. DO NOT SWITCH the camera to computer before the drivers will be installed.
2. The program requires DitectX versions 9.0 and above. To learn the version DirectX, installed in the system, click ПУСК -> Выполнить (start- >execute), type-set **DXDIAG** and click ENTER. In the window which has opened look at version DirectX:

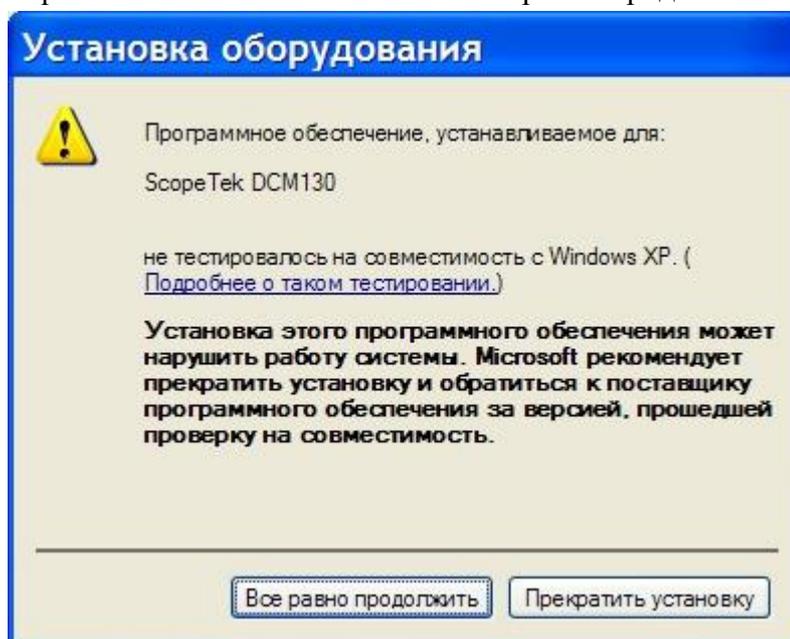


If the version is under 9.0, we shall install from the disk (the disk is in the drivers-file of the microscope)

3. Installation of camera drivers. Open the file “**DCM130(1.3MPix,Usb2.0)**” and start **autorun**. In the window which has opened select the device DCM130(1.3MPix,Usb2.0).

Comment: the name of the model depends on the type of the camera which is used

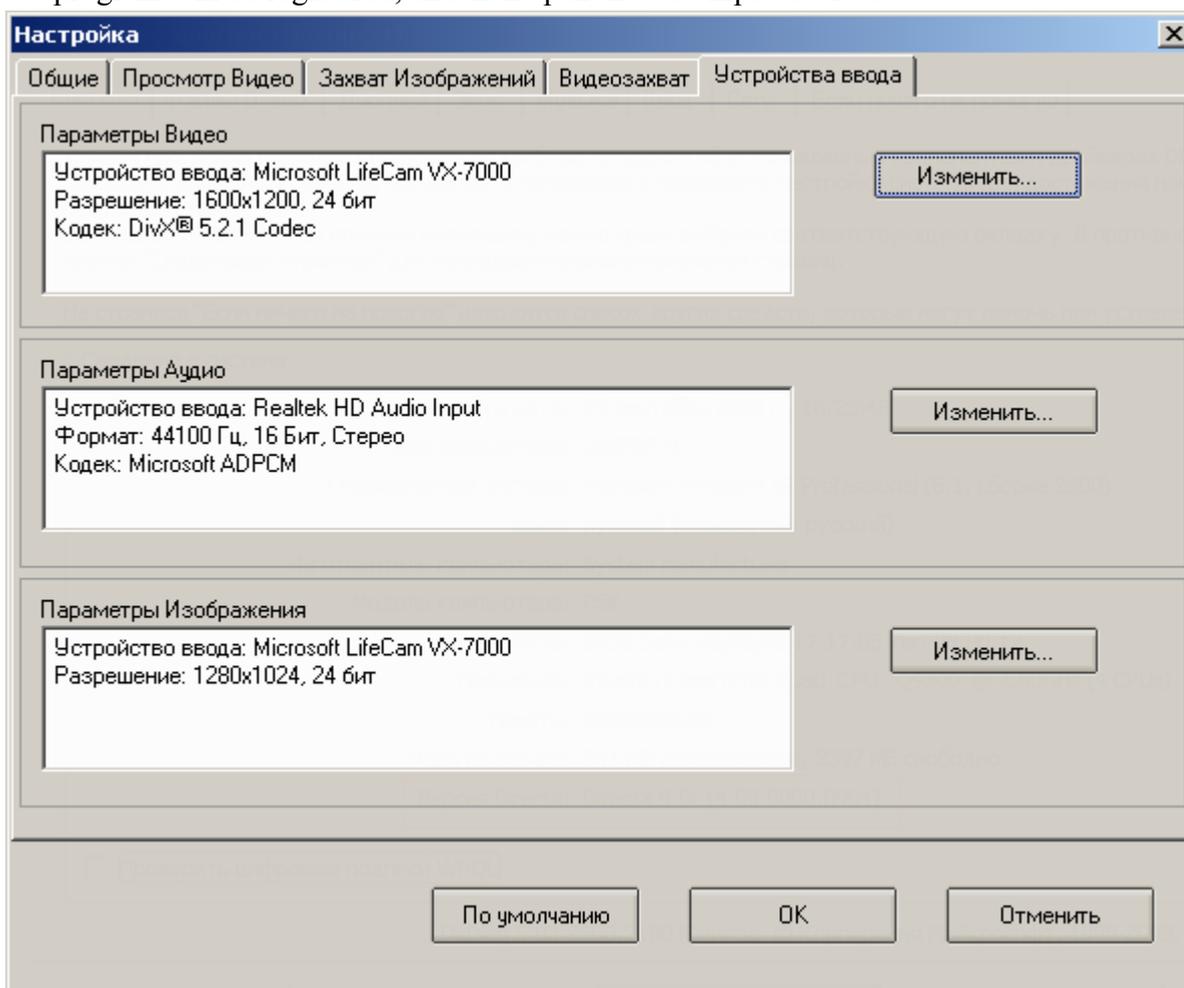
In process of installation the system will report many times, that the drivers have not been -tested on compatibility, and will specify, if they should be installed or not; all the requests should be answered with «Всё равно продолжить» (“all the same, continue”).



The request “ reload the computer now” should be answered with “yes”

After reloading of computer and loading of system the camera should be connected to computer; after that the System begins to install the drivers of the camera. The request “Automatic installation or installation from the indicated source” should be answered with “Automatic installation”; the further requests about the drivers which has not been certificated, should be answered as recommended in pos.3

4. Install the key driver HaspHL. Connect the key to computer.
5. Install the program DIANEL-MICRO. The labels to the program are created on the desktop and in “START->all programs-> Nelian → Micro”
6. Start DIANEL-MICRO. In the window which has opened click the button “Setting”, the program will be registered, and then open the tab “Input-devices”



7. Here the parameters of Video and Audio should be set; to do it, click corresponding buttons “Change”.

For Video should be chosen:

Device: Micrometrics 122 CLJ

Format: 640x480, YUY2 (or above/below, depending on productivity of computer)

Codec – it is recommended to use DivX with a standard adjustment of compression

For Audio (if it is necessary to record a soundtrack for Video and if there is a microphone):

Device: Your sound card

Quality: High or average

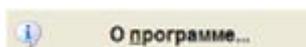
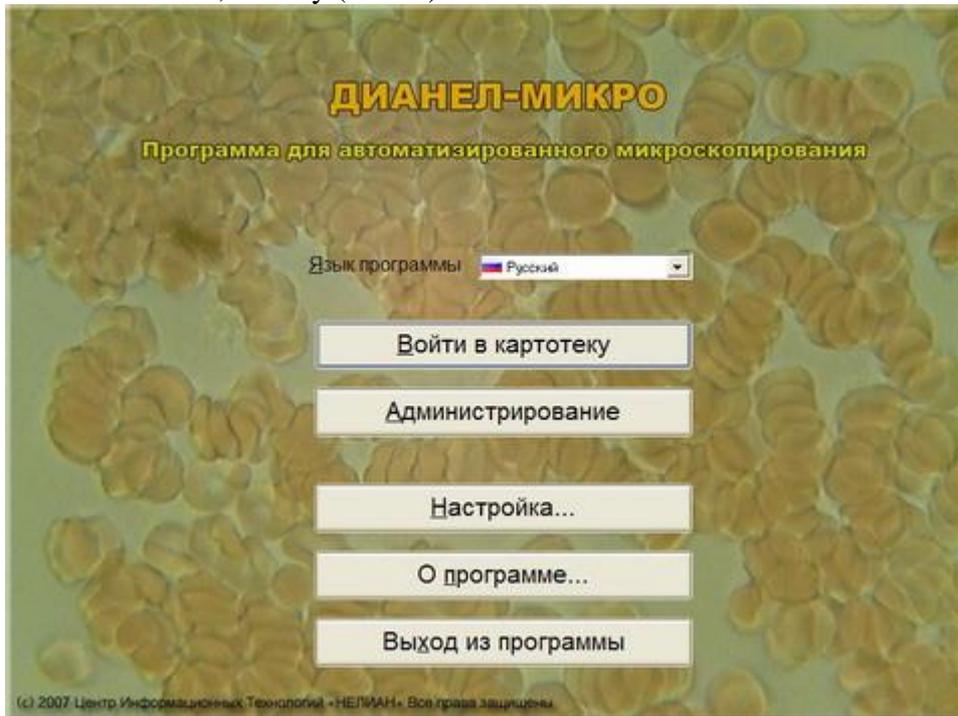
Codec: Microsoft ADPCM is recommended. In productive computers can be used
Lame MP3 Codec, in computers with a low productivity the recording of sound is not
recommended(Amd Sempron 2500+, Intel Celeron 2500 and below)

8. The work can be started

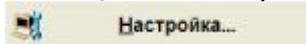
12. WORKING WITH THE PROGRAM DIANEL-MICRO

The software DIANEL-MICRO is intended for displaying of fields of vision on the screen of monitor when investigating biomaterial with the dark field microscope “DIANEL-MICRO”; for forming of haemoscanning-examinations-data base; for processing and storing of information about examination which have been carried out; for carrying out of common clinical questioning of patients with a posterior forming of epicrisis and of corresponding recommendations according to the results of examination.

The program can be started with two clicks of mouse on the Desktop; the icon DIANEL-MICRO will be activated, the key (HASP) will be tested and the screen saver will be loaded.

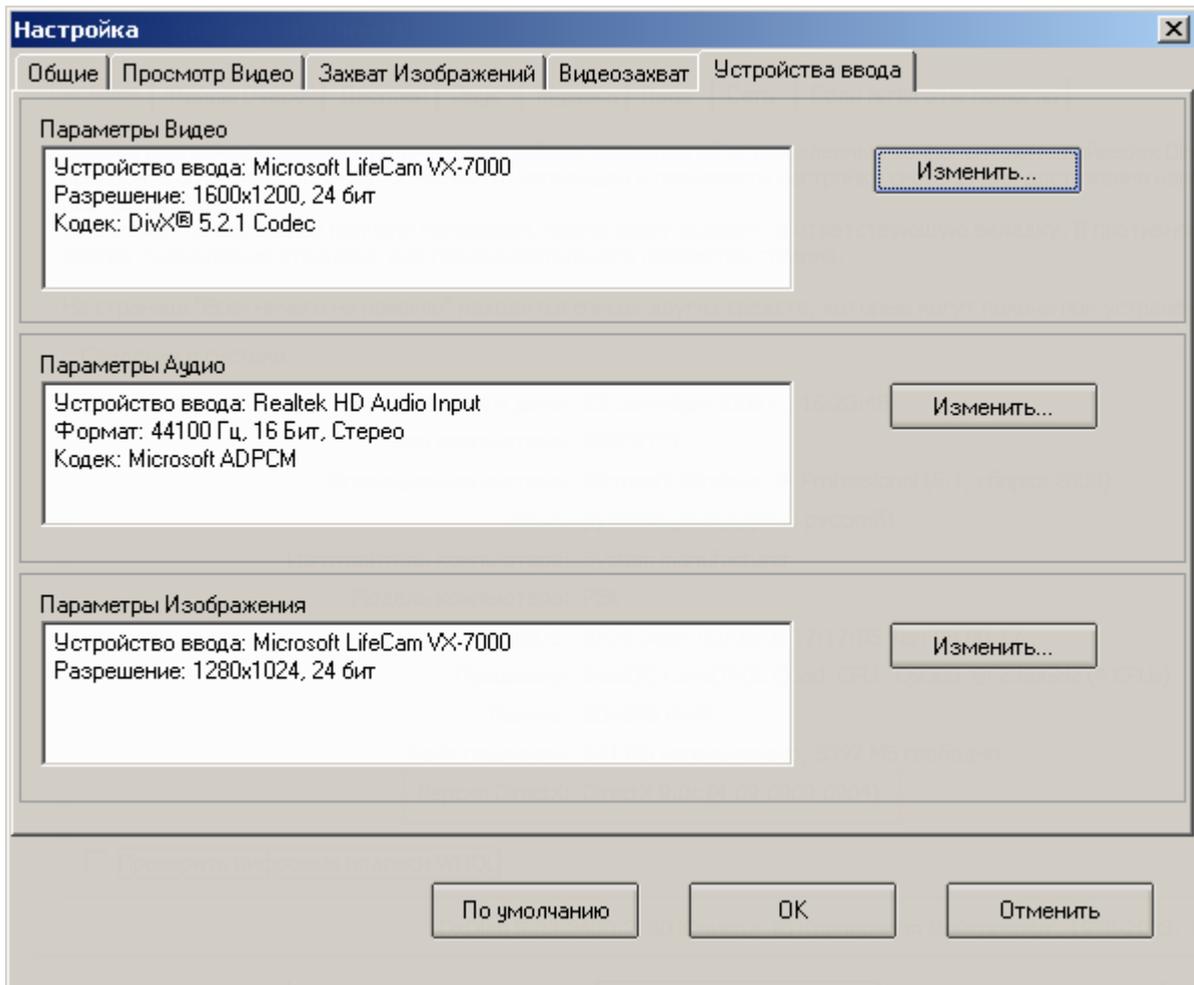


The window showing information about the authors of the program, the version, the date of publishing, the author’s rights etc. opens.



Program adjusting window opens

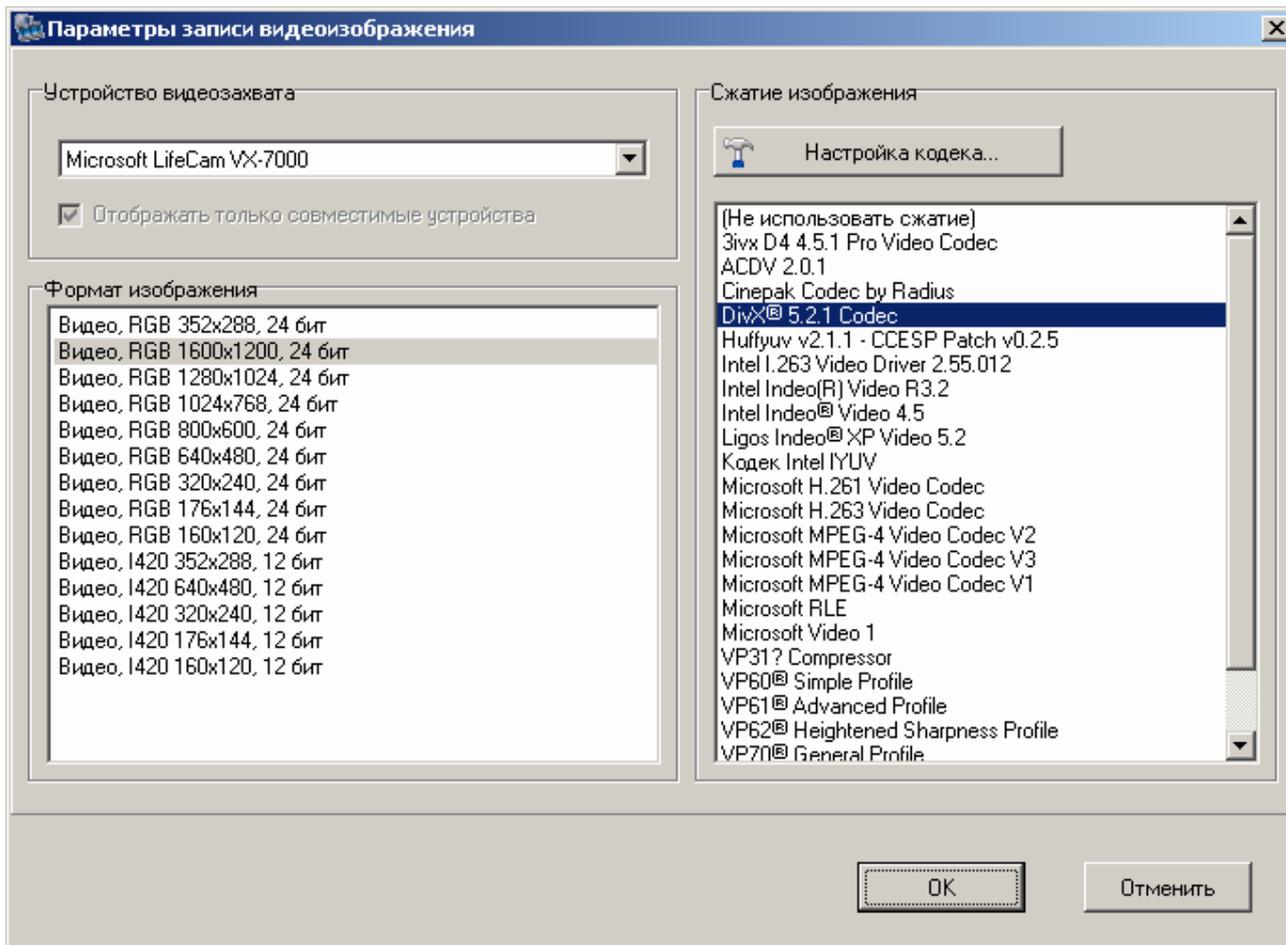
Input devices



VIDEO and AUDIO parameters influence the recording of video files. (Window «Захват Видео» (“Capture of video”)). This adjustment is accessible from the window “Capture of video”, too. In computers with a low productivity one has to choose: video-not more than 640x680. (Attention! Not all cameras can support the mode video); in audio the recording of sound is not recommended.

The parameters of image influence the getting of photos (window “Capture of images”). The recommended resolution – a maximal one for the given video camera. It is accessible from the window « Capture of images », too.

PARAMETERS OF VIDEO



PARAMETERS OF VIDEO

«Image format» - the list of video formats feasible for the selected device. The choice depends on the general productivity of the system. The first item in the list - «do not use compression» is not recommended because of the huge sizes of received files.

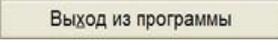
«Codec adjusting» -changing of encoding parameters of a concrete codec which is selected. The parameters are selected in an experimental way, dependent on the general productivity of the system.



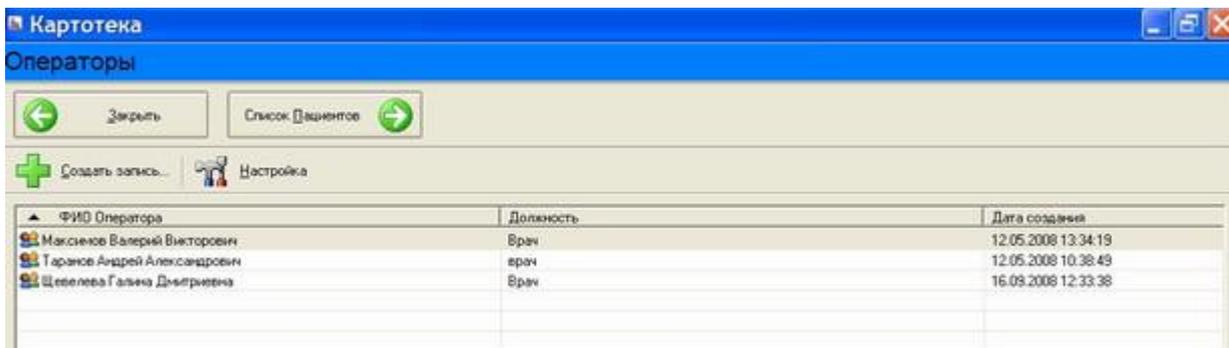
Войти в картотеку

The window “Card files”, “Operators” is opening.

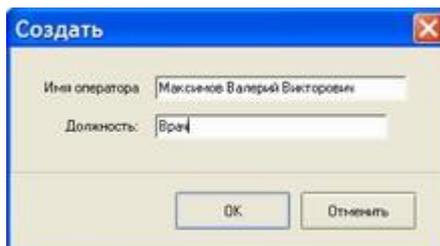
In the certain adjustments of the key (HASP) to the program DIANEL MICRO in the main menu appears the function  **Администрирование** (administrating), which allows to enter a special registration code from the card; owing to that in the window “Operators” the registration records can be edited and deleted; besides that the “Magazine of events” can be looked through.

LANGUAGE OF THE PROGRAM. The button allows to switch the Russian and the English version of the program.  When clicking this button, we can leave the program.

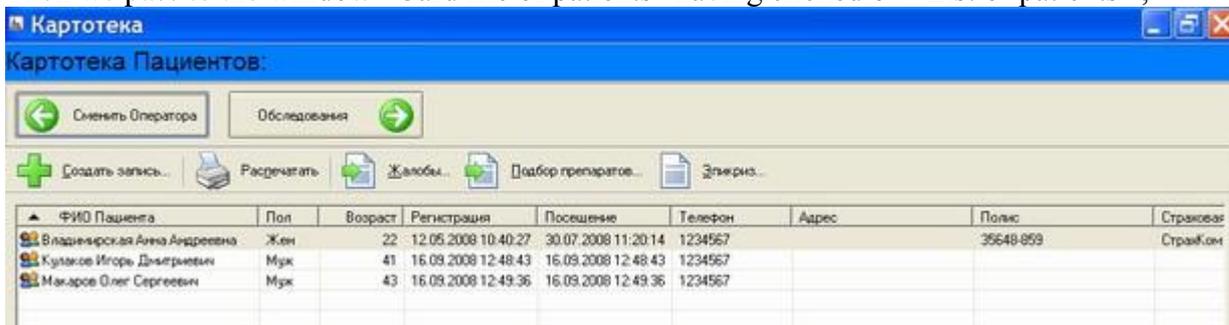
 When clicking this button, the program enters the window “Operators”, where the list of doctors-operators, who has carried out the examination, is presented. The function “Setting” in the window “Operators” is similar to those in the screen saver of the program.



To enter the data of a new operator, we have to click on “Create a record”, to fill in the offered form, click OK; then the data of a new operator will appear in the general list.



Then we pass to the window «Card file of patients» having clicked on “List of patients” ,



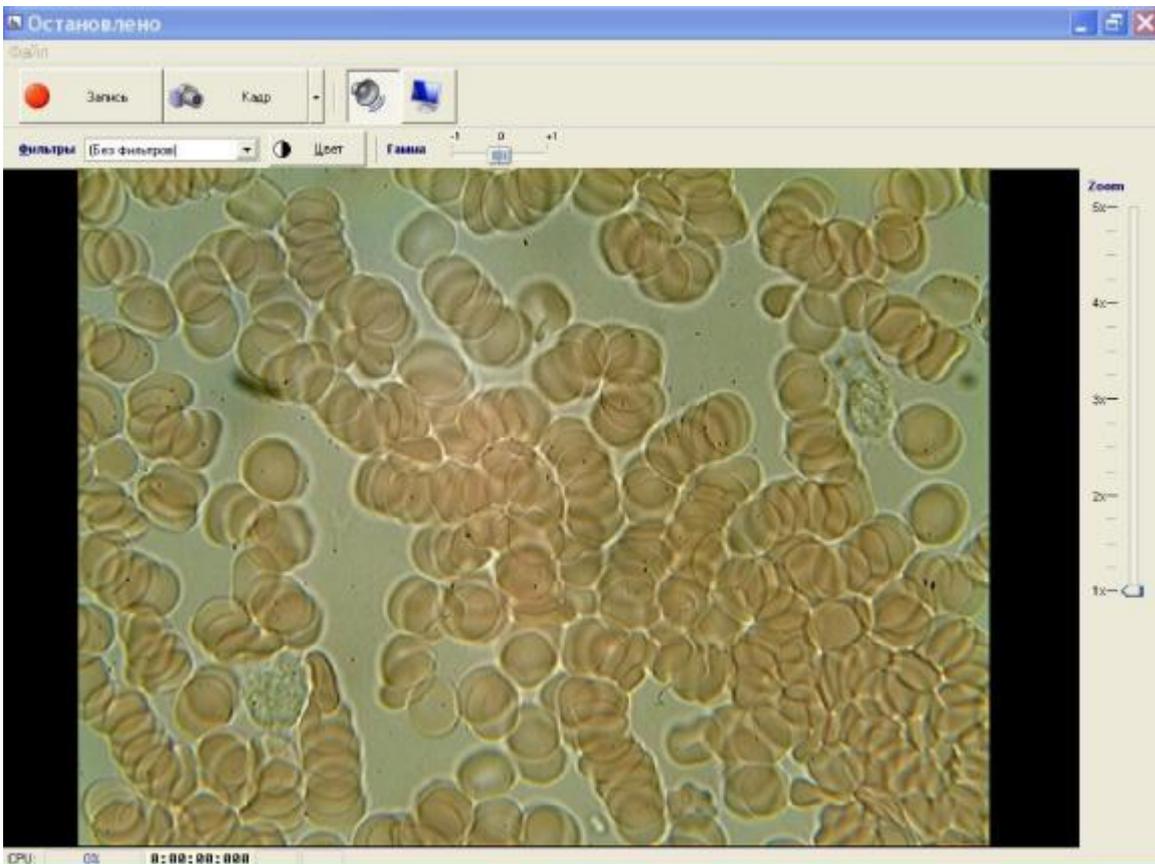
enter the data of a new patient, using the function “Create a record”, OK; then the data of patient will be added to the general list,

and the program passes to the window “Gathering of information: Complaints”, where the patient will be asked about the condition of his organs, according to the points, imaged on the virtual model with using of the list of corresponding complaints.

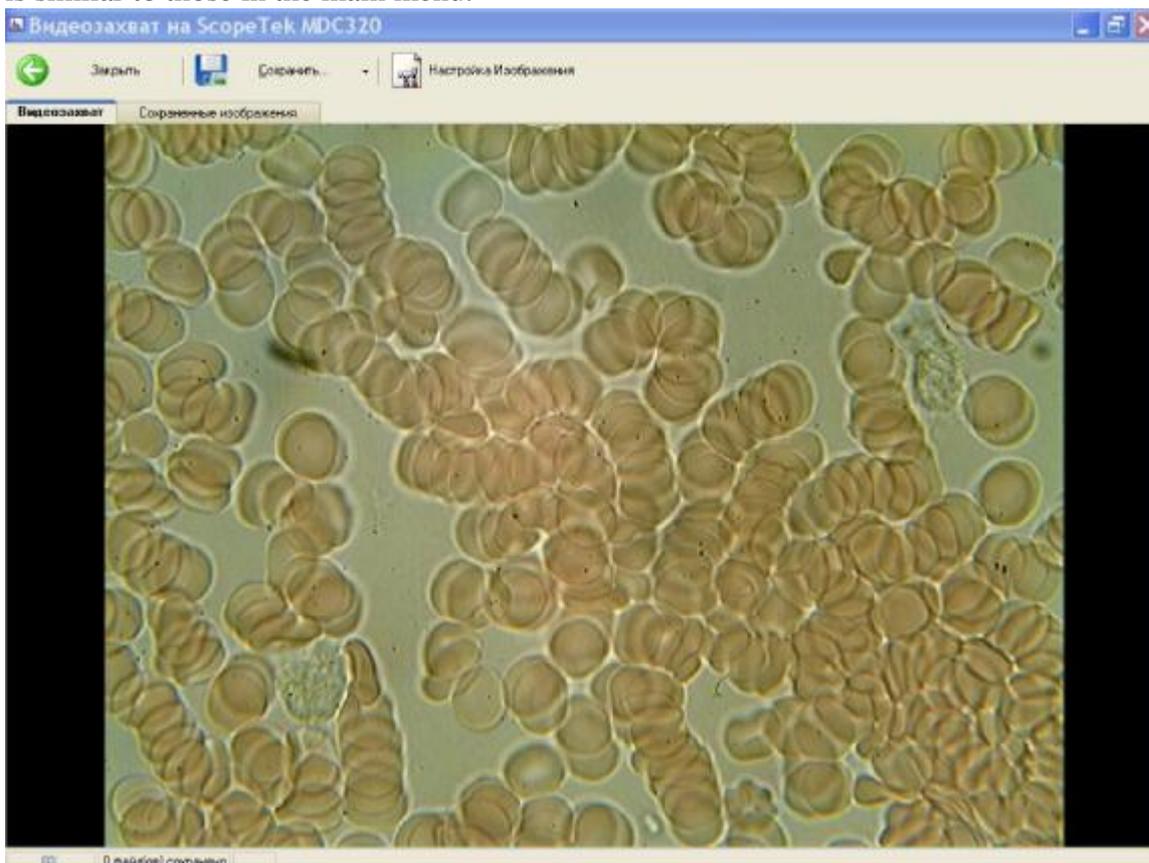
To place the list of selected complaints into epicrisis, we have to click on “Into epicrisis”. After having asked the patients, we close the window and return to the window “Card file of patients”; then we leave this window and go to “Examinations”, having clicked the corresponding button. In the window “Conducted examinations” we can use the function “Take a photo” or “Take a video” to display on the monitor a static or dynamic image of the bio-material, which is being examined at the moment.



At the option “Take video”, if the button “Record” is activated, the current image of the field of vision in format video (AVI), the button ”Sequence” allows to fix the image in JPG format. The button, representing a loudspeaker, allows to switch on and switch off the sound. The next following button allows to pass to the fullscreen mode of viewing the image and on the contrary. The “Filters” allow to change the quality of image. The next following button allows to change the color of image (colored to black-white). The option “Gamut” is intended to make the image more light (slider to the right) or more dark (slider to the left).

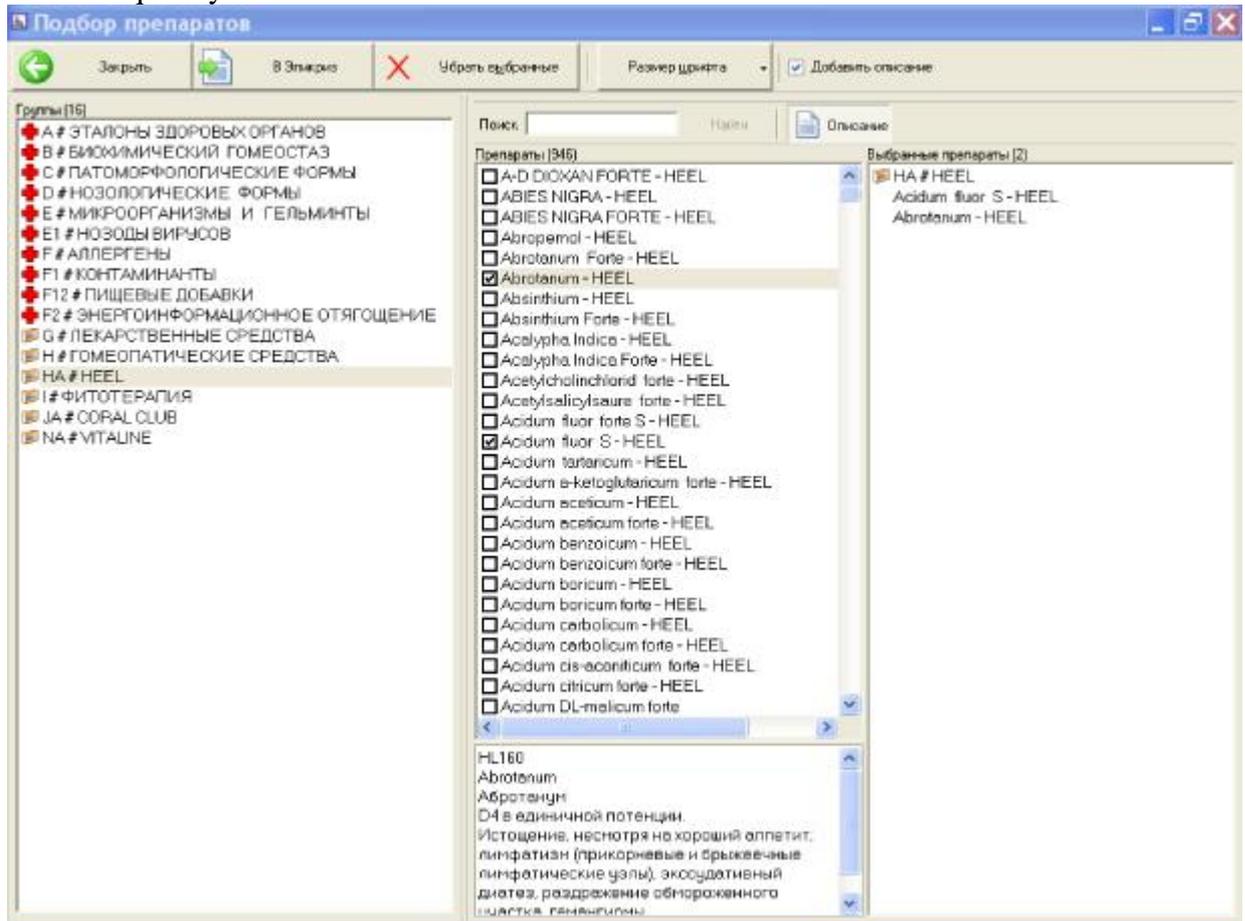


The function "Photo" allows to look through the static image of the fields of vision (button " Videocapture ") and to store the pictures in JPG format. The button « Adjustment of the image » is similar to those in the main menu.



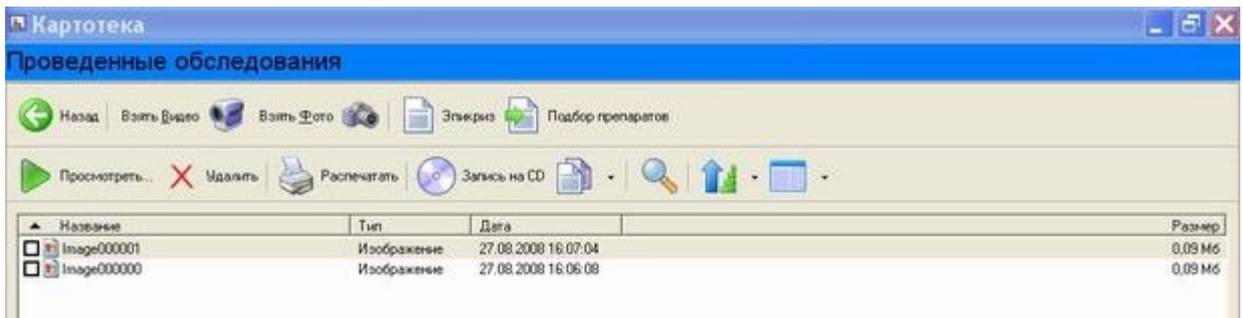
The function« Selection of preparations » allows to pick out of the chosen group one or more preparations and to send them to “Epicrisis” with summaries or without them for being printed

out subsequently.



Having selected the preparations, we return to the window “Conducted examinations” and enter the “Epicrisis”, where the list of presented complaints is already placed in the section “Complaints”; the selected preparations can be found in the section “Health improving program”. In the “Epicrisis” the section “Anamnesis”, “Results of examination” have to be filled in, and “From the list” we choose recommendations and various health improving programs. After a preliminary viewing and necessary corrections the text of epicrisis can be sent to “To be printed out”.

In the window “Conducted examinations” after the examinations the list of stored video and photo files appears; the selected images can be looked through with the function “Viewing” or deleted with “Delete”. The selected picture can be printed out (button «Print»), or saved with «Store on CD». The next following button  allows to copy a selected file or a list of files into any other folder. The button representing a magnifying glass , allows to open the window of the selected file. In the window «Conducted examinations» also are available the functions of sorting of stored images by name, by size and the functions of display mode changing. .



After finishing the work with the program “DIANEL MICRO” we have to close all the windows, to pass to the main menu and to leave the program with using the button “Exit out of the program”.

**Yours faithfully,
Collective of the Open Company "Center of Information Technologies
"NELIAN"**

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