



**Bio-Well GDV Camera 1.0, 2.0 & 3.0  
and Software Manual  
Ver. 6.1.0.67**

## Contents

<b>Contents</b> .....	2
Purpose .....	<b>Ошибка! Закладка не определена.</b>
Technical Information about Bio-Well GDV Camera device.....	<b>Ошибка! Закладка не определена.</b>
Important Remarks and Safety Measures	<b>Ошибка! Закладка не определена.</b>
Standard set of the Bio-Well GDV Camera 1.0 .....	7
Standard set of the Bio-Well GDV Camera 2.0 .....	7
Standard set of the Bio-Well GDV Camera 3.0 .....	7
Getting started .....	10
Software Interface .....	12
Cards list .....	20
Scans list.....	23
Creating a new Scan/Experiment.....	25
Preparing person for the examination.....	25
Rules of capturing fingers .....	26
Conducting a “Full Scan” .....	30
“Full Scan” results .....	33
Conducting a “Stress Test” Scan .....	62
“Stress Test” Scan results .....	63
Conducting a “One Finger” Scan .....	65
“One Finger” Scan results .....	66
Conducting an “Environment” Scan.....	68
“Environment” Scan results.....	72
Comparing Scans .....	77
Offline Mode.....	82
Previous GDV Readings.....	83
Calibration guidelines .....	84

## Terms

**Area** – *Bio-Well Software* parameter calculated as number of pixels on the GI related to the object being analyzed.

**Bio-Well Account**– an account (Login and Password) created on website that allows *User* to work with the *Bio-Well Software database*.

**Bio-Well GDV Camera device** – is a USB digital camera that is able to extract *electro-photonic emission* from the conductive object placed on its electrode, capture the resulting *gas discharge* (created by excitation of air molecules by the *electro-photonic emission*) and send the created *glow images* to the computer via USB cable for further processing.

**Bio-Well Server** – Internet server that hosts the code for analyzing/processing the *Scans* made by the *Bio-Well GDV Camera device* and keeps the *Bio-Well User's databases* of *Cards* and *Scans*.

**Bio-Well Software** – is a computer program that is able to read the captured *glow images* from the *Bio-Well GDV Camera device* via USB cable, to edit and send them to the remote server for calculation of the various parameters.

**Bio-Well Subscription** – payment made on [www.bwacc.com](http://www.bwacc.com) for the activation of the *Bio-Well Account* that activates the possibility to conduct new *Scans* and *Calibration*.

**Calibration** – process of tuning the *Area* and *Intensity* parameters of the *Glow* to the current environmental conditions by adjusting the voltage of the *Bio-Well GDV Camera* (for *Area calibration*) and creating appropriate *Intensity correction coefficient* on the *Bio-Well Server* (for *Intensity adjustment*). Additionally for the *Bio-Well 2.0 & 3.0*, the spectrum of the *Glow* is also being tuned during *calibration*.

**Electro-photonic emission** – flow of electrons from a conductive object under the influence of a high frequency, high intensity electro-magnetic impulse that creates the photonic emission (*Glow*) in the air.

**Electro-Photonic Imaging (EPI)** – technology (synonym of *GDV*) based on the *Kirlian effect* that allows the capture and processing of digital images of the gas discharge (*Glow*).

**Energy** – *Bio-Well Software* parameter derived as numeric evaluation of the energy of the *Glow* captured by the *Bio-Well GDV Camera device* and calculated by multiplication of *Area* on *Average Intensity* of the correction coefficient.

**Environment** – regime or mode of capturing the *GI* of the attached external sensor on the glass electrode of the *Bio-Well GDV Camera device* using the calibration metal cylinder with fixed time intervals (varying from 560 seconds for *BW 1.0* and 1-60 seconds for *BW 2.0* and *3.0*) between captures These

external sensors are the: Bio-Glove; Sputnik sensor and Water sensor. Area and Intensity are captured and Energy, Entropy and the Activity Level of the Environment parameters are calculated.

**Full Scan** – regime or mode of capturing GI of human fingers (all ten) in the Bio-Well Software that allows to maximum parameters about the functional (energetic) state of a person, his/her systems and organs, based upon the mapping of acupuncture points onto sectors division of each finger and more than 20 years of clinical studies.

**Gas discharge (Glow)** – light emitted by the gas (air) due to the excitation of its molecules by the electrons and photons from an object under study with the use of EPI technology.

**Glow Images (GI)** – digital images created by the *Bio-Well Software* after processing the *Glow* from the object placed on the glass electrode of the *Bio-Well device*.

**Gas Discharge Visualization (GDV)** – same as EPI (synonym).

**Intensity** - *Bio-Well Software* parameter calculated as the average value of the intensity (brightness from 0 (black) till 255 (white)) of the pixels of the GI related to the object being analyzed.

**Kirlian effect** – phenomenon of *electro-photonic emission* from conductive objects under high intensity high frequency electro-magnetic field.

**Offline mode** – regime of the *Bio-Well Software* functioning without Internet connection, that allows capture of the GI, but doesn't allow processing of the captured images. Calibration procedure is not available.

**One finger** – mode of capturing glow images of one human finger several times in a row (from 4 to 100 times) for further assessment of time dynamics of all EPI/GDV parameters of whole finger or specific sector.

**Online mode** - regime of the *Bio-Well Software* functioning with Internet connection, that allows viewing and editing of the database (if Subscription is not paid) and calibration, capturing the GI, processing the GI and calculating parameters (if Subscription is paid).

**Scan** – an experiment made by the *Bio-Well User* in the *Bio-Well Software*.

**Stress parameter** – numeric evaluation of the psycho-emotional and functional state of a person being scanned, based on assessment of the external contour curvature of the GI of fingers scanned.

**Stress scan** – regime or mode of capturing images of human fingers (left and right ring fingers) in the *Bio-Well Software*, that allows User to assess *Stress*, *Energy* and *Balance* parameters.

## Purpose

Bio-Well Software is specifically designed to work with the Bio-Well GDV Camera device: BW 1.0, 2.0 & 3.0 models. It allows: the capture of images of human fingers in several modes and to conduct experiments with external sensors and the processing of the captured data on the Bio-Well Server.

The Bio-Well GDV Camera device can be used for the purpose of capturing and analyzing the electro-photonic glow of human fingertips and other conductive objects placed on its electrode. There is no mention of disease or medical condition claims, and the technology does not pose a risk to the safety of users.

## Technical Information about Bio-Well GDV Camera device

Bio-Well GDV Camera device belongs to the category of electrical equipment for use in ordinary locations.

The device is intended for use in a Dry Location — a location not normally subject to dampness or wetness.

Bio-Well GDV Camera device provides no risks to life and property.

The device is intended for working with a personal computer.

Operating conditions:

- ambient air temperature from +18°C(65°F) to +35°C(95°F);
- relative air humidity 30-70% at a temperature of 30°C;
- atmospheric pressure from 84 to 106.7 kPa (630–800 mmHg);
- direct current power supply via USB with operating voltage of 5V.

*NB! Main parameters, characteristics, dimensions and warranties are provided in the Passport of the Bio-Well GDV Camera device (supplied with every device).*

## Important Remarks and Safety Measures

User should pay special attention to the following:

- While touching the glass electrode of the Bio-Well GDV Camera device do not touch any grounded conductive objects (like heating pipes, etc.).
- During the scanning process keep the Bio-Well GDV Camera device at least 50cm from the computer and any other active devices like telephones, fitness trackers, etc. Do not wear these items and empty all pockets of mobile telephones, fitness trackers, crystals, metal objects
- Always keep the glass electrode of the Bio-Well GDV Camera device in clean condition (using alcohol or wet tissues with alcohol – best option; if not possible – use regular screen cleaner).
- If Bio-Well GDV Camera device was in a cold environment (less than 10°C/50°F) before starting using it please wait for at least 1 hour to warm up.
- During “Environment” Scans (experiments) shifts in relative humidity should not exceed 5% and shifts in air temperature should not exceed 5°C.
- During “Environment” Scans do not turn on/off electrical devices within the room where the Bio-Well GDV Camera device is operating.
- Do not use cell phones near the Bio-Well GDV Camera device or Sputnik sensor as it can alter the result.
- Presence of different people in the room may affect the measurement results.
- Do not take “Environment” measurements during strong atmospheric changes as they can affect the readings.
- Be aware of changes in geomagnetic background (e.g. Sun and Moon rise/setting, magnetic storms) during “Environment” measurements.

## Standard set of the Bio-Well GDV Camera 1.0

Together with any Bio-Well 1.0 device you should get the following items:

- Standard finger insert
- Big finger insert
- Calibration cylinder insert
- Calibration wire with “banana” plugs on both ends
- White calibration stand
- Fabric napkin
- USB cable for connection of the Bio-Well device to your computer
- Passport of the Bio-Well device
- Quick-start guide

## Standard set of the Bio-Well GDV Camera 2.0

Together with any Bio-Well 2.0 device you should get the following items:

- Transporting bag
- Standard finger insert
- Big finger insert
- Calibration cylinder insert
- Calibration wire with “banana” plugs on both ends
- Fabrik napkin
- USB cable for connection of the Bio-Well device to Windows PC
- USB cable for connection of the Bio-Well device to MAC computer
- One pack (100pcs) of Bio-Well plastic filters
- Passport of the Bio-Well device
- Quick-start guide

7

## Standard set of the Bio-Well GDV Camera 3.0

Together with any Bio-Well 3.0 device you should get the following items:

- Transporting bag
- Standard finger insert (optional: additional spare insert)
- Calibration cylinder insert (optional: banana wire)
- Cylinder insert for connecting Bio-Well accessories (i.e. Sputnik)
- Fabrik napkin
- USB cable: USB-A to USB-C
- USB cable: USB-C to USB-C
- One pack (100pcs) of Bio-Well plastic filters
- Passport of the Bio-Well device
- Quick-start guide

Bio-Well 1.0 device front and back view:



Bio-Well 2.0 device front and back view:

*The only difference between 2.0 and 1.0 Bio-Well device external design is presence of the ventilator button at the back of the 2.0 device.*

Bio-Well 3.0 device front and back view:

8



At the back of the BW 3.0 device you can see two sockets: USB-C port for connection to the computer and (round one) ground contact ("earthing").

External design elements:

1. LED (works the same way on 1.0& 2.0 devices)
  - Turns **green** if power is ON and device is recognized by the operating system of your computer.
  - Turns **orange**(1.0& 2.0 devices)& stays OFF (3.0 device)if power is ON, but device is not recognized by the operating system of your computer.

*Check the drivers installation or reinstall the software while deactivating antivirus and firewall. Turn off the Bluetooth on your computer – it may conflict with the Bio-Well device.*

- Blinks from green to orange (1.0& 2.0 devices) or blinks green (3.0 device) while connecting to the computer or during capturing an image.
  - Doesn't light up at all: no power. *Check the USB cable connection, if it doesn't help – contact local Bio-Well representative.*
2. Place for the finger insert or calibration cylinder insert.
  3. USB cable socket: USB-B for Bio-Well 1.0 and 2.0 devices, USB-C for Bio-Well 3.0 device.
  4. “Ground” or “Earth” socket. Used for connection of the calibration cable during calibration of 1.0 and 2.0 devices.
  5. Ventilator button (only on BW 2.0). Turn it ON when using Bio-Well device in humid environmental conditions, especially when doing long-term experiments with Sputnik, glove or water sensor. In all other cases keep it OFF.

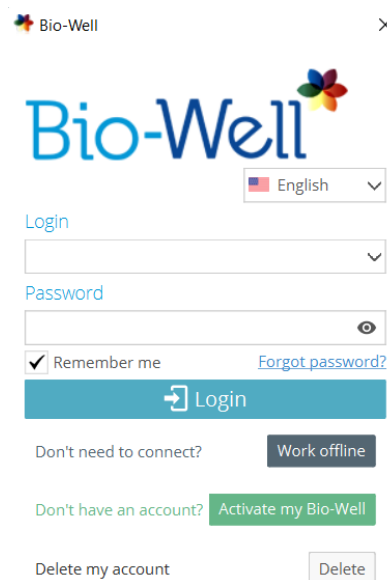
## Getting started

To begin your work with the device, first download and install the latest version of the Bio-Well Software from the website: <https://bio-well.com/pages/download-the-bio-well-software>. Users with MAC OS 10.13 and higher should download the Bio-Well software from the AppStore. Download and/or installation may be affected by the computer's firewall, antivirus, or similar security software. Disabling of one or more of these resident programs for the time of installation of the Bio-Well software may be necessary for successful installation. Once the installation process is completed, and a subscription has been purchased ([www.bwacc.com](http://www.bwacc.com)), connect one end of the included USB cable to the rear of the Bio-Well GDV Camera device, and the other end to the computer.

Subscription login and payment information can be reviewed and updated by logging in to the website [www.bwacc.com](http://www.bwacc.com).

If you experience any problems with the installation or starting the Bio-Well software please refer to the FAQ section on the Bio-Well official website (click "Education" and select "FAQ": go to the section devoted to the software issues) <https://bio-well.com/pages/faq>. If FAQ doesn't help – please contact the local Bio-Well representative.

The Login window appears (pic. 1):



*Pic. 1. Login window of the Bio-Well Software.*

For standard Online mode (connected to the Internet), choose the language, enter the subscription Login (Username) and Password (that you have obtained during registration process on [www.bwacc.com](http://www.bwacc.com) and click "Login" button.

NB! If you need to change the language of the interface in the Bio-Well software, click “Account” and select “Log out”, and you will get back to the login window (pic. 1) to select another language.

Each Bio-Well GDV Camera device requires a subscription account (Login/Password) by default. If you try make a Scan with any Bio-Well device not associated with the account you will be notified that it is impossible and that you are using wrong device. It is possible to change the limit of devices that can be connected to one Account (Subscription) in your private cabinet on [www.bwacc.com](http://www.bwacc.com). Monthly or yearly payment will be multiplied on the number of the devices that are allowed to be used under one Account (Subscription). For more information about Subscription and payment options please visit [“Subscription” page](#) on the website <https://bio-well.com/pages/demo>.

***NB! Bio-Well Account is not connected or attached to your computer – it can be accessed from any computer with installed Bio-Well Software and connected to Internet.***

Any Bio-Well device can be used with unlimited number of accounts. In example, **one** Bio-Well device can be used by different Users on different days under different Accounts.

If you have installed and started Bio-Well Software without registering a Bio-Well Account/Subscription beforehand – then please click **“Activate my Bio-Well”** button that will redirect you to [www.bwacc.com](http://www.bwacc.com) website for registration of an Account or access any of the public Bio-Well accounts:

Login/Password = medic/medic – public account for cases with known medical conditions;

Login/Password = mind/mind – public account with psychological cases;

Login/Password = sputnik/sputnik – public account with Sputnik and water sensor scans;

Login/Password = biocor/biocor – public account with Bio-Cor application cases;

In order to save your login details and automatically log in to the Bio-Well Software tick the “Remember me” option.

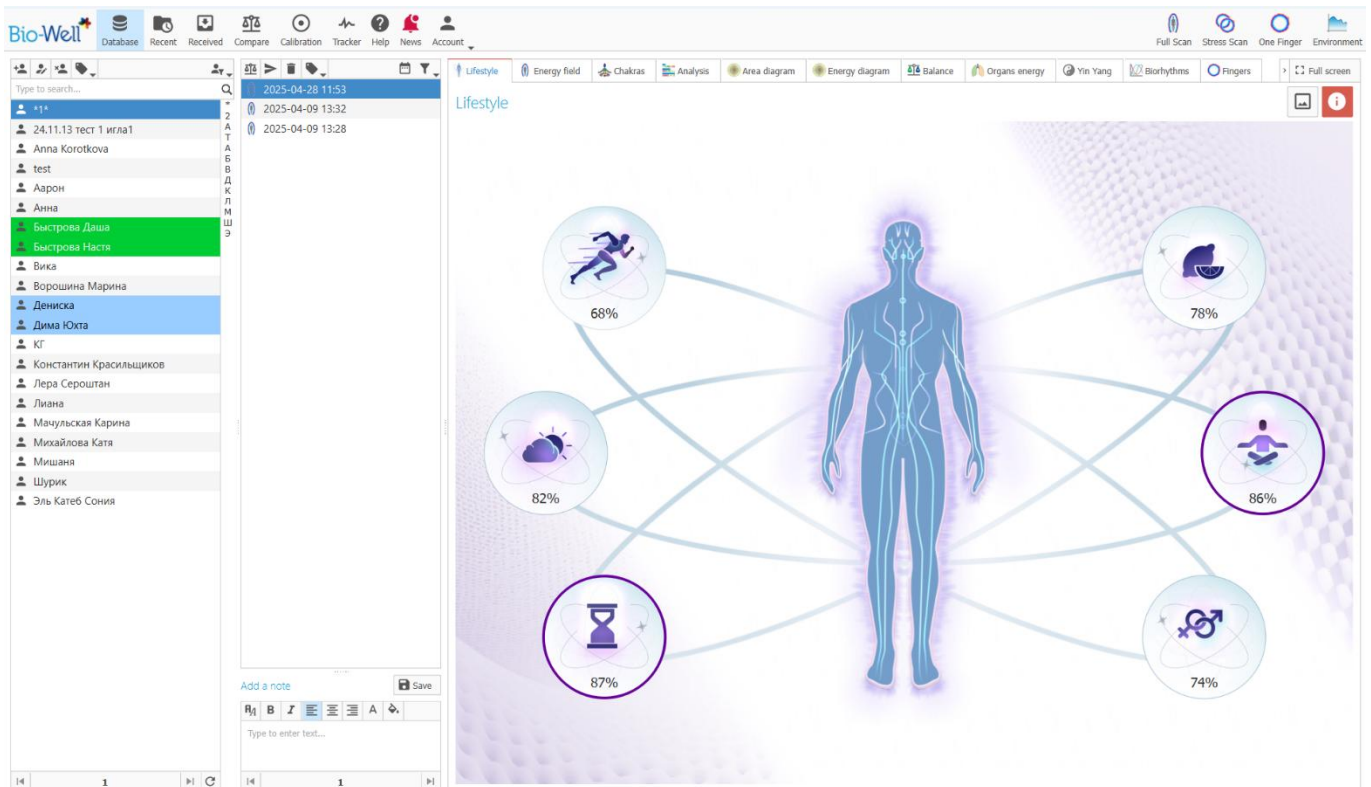
If you have forgotten password - click **“Forgot password”** link – you will be redirected to the website for resetting the password.

For Offline mode (not connected to the Internet), choose the Language and click “Work offline”.

If you want to delete your account with all the scans click “Delete” button.

## Software Interface

Once logged in, the main window will appear (pic. 2). This dashboard-style layout provides access to all software functions and scan history.



12

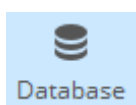
*Pic. 2. Main screen of the Bio-Well Software.*

In the top bar of the window you can find the version of the Bio-Well Software that you are logged in and in brackets you can find the expiry date of your paid subscription.

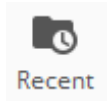
Main screen interface of the Bio-Well Software can be divided into three parts: control panel (at the top of the screen); database part (left side of the screen), that consists of two columns; and results part (right side of the screen), that represents the results of processing the obtained GI.

### Control panel

Control panel is divided into two parts: left side is devoted to the database and settings, right part is devoted to the buttons for creating new scans in “Full scan”, “Stress scan”, “One finger” or “Environment” modes.



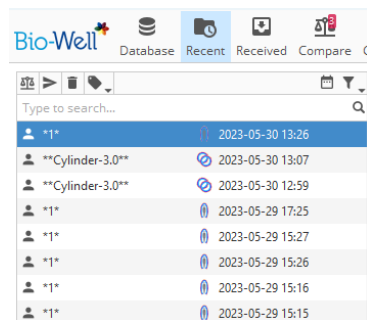
- standard view of User’s database represented as a list of Cards organized according to alpha-numeric sequence (see pic. 2).



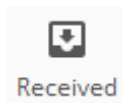
**Recent** - User's database view where Scans are organized according to the date and time of the Scan. Each line consists of 3 parts (from left to right): name of the Card, icon of the type of the scan, and date and time when that scan was made (with the length of the experiment in case of "Environment" scans).

Click on the calendar icon to search for the scans made on a specific day.

Click the filter icon to filter the list according to the type of the experiment or according to the label.



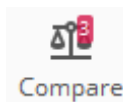
*Pic. 3. Recent scans interface.*



**Received** - opens a list of all Scans received by the User from other Bio-Well Software Users organized according to the time sequence. Each line shows: name of the Card, login name of the User who have sent the Scan, icon of the type of the Scan, and date + time of the Scan. Red number on the button will show the number of newly Received Scans that you haven't opened yet.



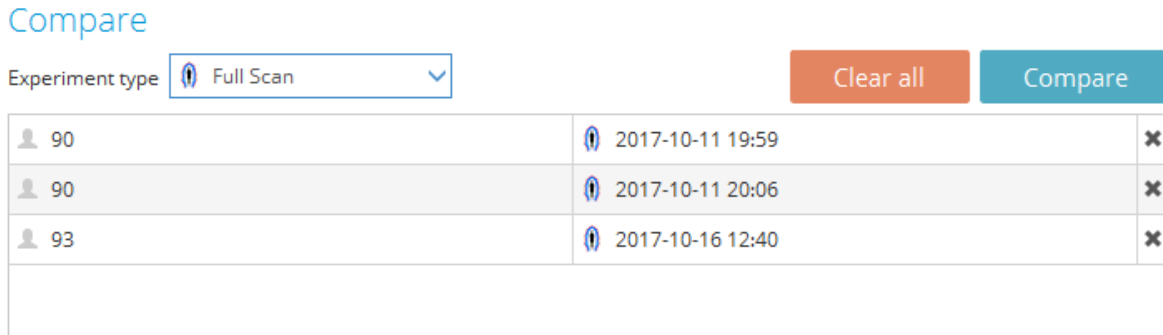
**Compare** - opens a special interface for comparing Scans between each other (that were selected and sent for Compare beforehand by the User). Red number on the button will show the number of Scans sent for compare.



Once you have selected Scans that you want to compare between each other you will see the red number on the Compare button.

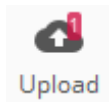
Click on it and you will see the screen with the list of the Scans that you are going to compare (pic. 4).

Here you can delete those scans that you don't want to compare by clicking the "X" sign at the right side of the Scan line or simply click "Clear all" button to delete all the Scans from this list. If you are okay with the list – press "Compare" button.



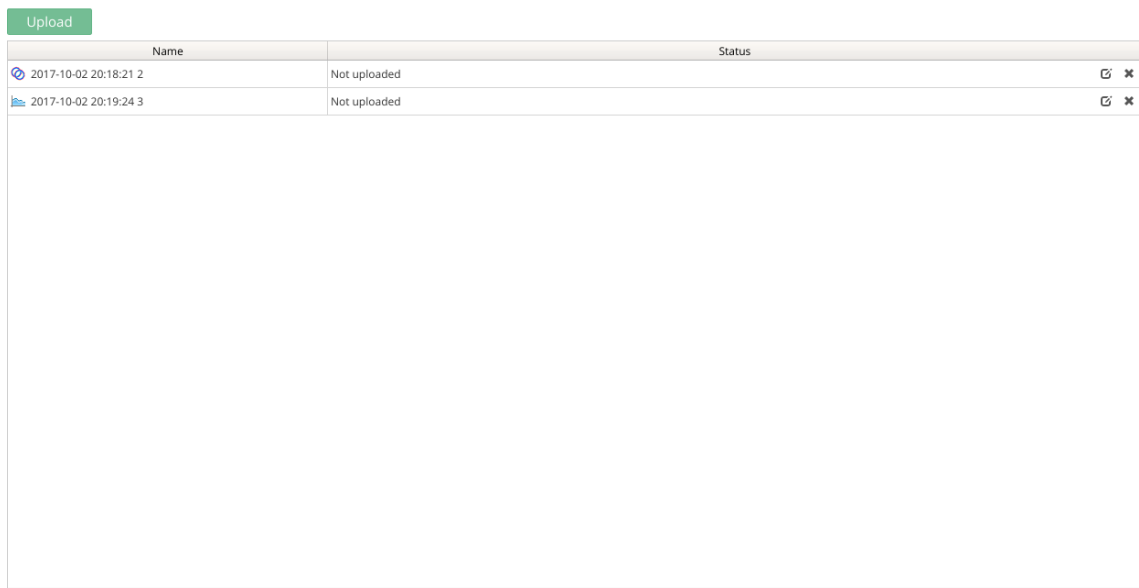
*Pic. 4. Preview of the Scans list that you are going to compare.*

In the opened screen you will have the opportunity to analyze the parameters calculated for each of the Scans from the Compare list. See the Chapter devoted to Comparing of different types of Scans.



**Upload** - opens a list of the Offline scans saved on the computer (pic. 5). This button appears only if you have Offline scans saved on the computer, else it will be omitted. Red number represents the number of scans available for upload.

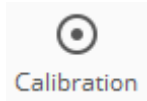
14



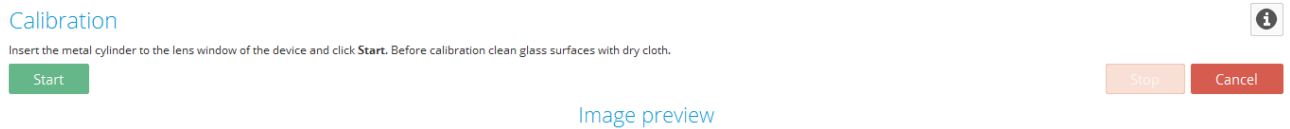
*Pic. 5. Uploading offline experiments interface.*

If you don't want to upload some of the Scans (Experiments) click the "X" sign on the right side of the Scan line.

To start the upload please click the green "Upload" button. Experiments will be uploaded to your database on the server.



- opens a special interface (pic. 6) for calibrating the Bio-Well GDV Camera device and retrieving general technical information about the Bio-Well GDV Camera device and it's functioning.



*Pic. 6. Calibration interface.*

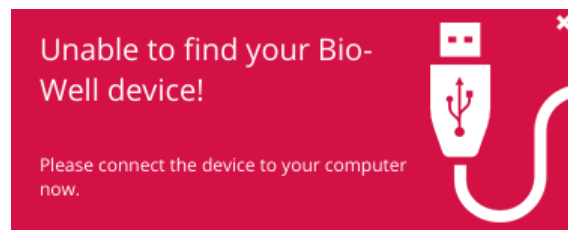
For calibration you need a Calibration Pack (it is supplied with every Bio-Well device).

Prepare the device for the calibration and click "Start". Detailed instructions are given at the end of this manual.

Follow the instructions on the screen to finish the calibration procedure.

You can stop the procedure at any moment by clicking "Stop" button. To leave the screen and return to the Database view – click "Cancel" button.

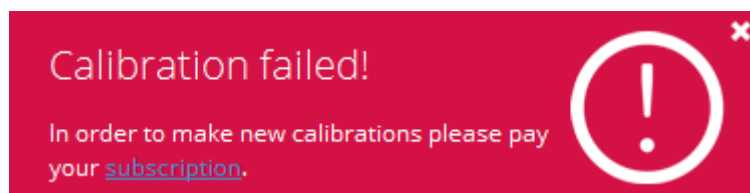
If your computer doesn't recognize the Bio-Well device due to some reasons (driver problems, antivirus, USB connection, etc.) it will show the following pop-up window:



*Pic. 7. Warning window.*

If you see this window (pic. 7) – please check the USB connection cable and driver installation. If you are unable to solve the problem – go for technical support.

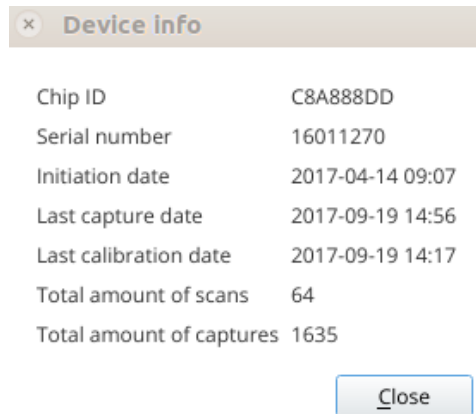
If your Account has got Expired software will not allow you to make Calibration: at the end of the procedure you will get a pop-up warning:



*Pic. 8. Warning window: Account has got Expired.*

For more detailed information on calibration procedure please watch the video tutorial on <https://bio-well.com/pages/manuals> and read the guidelines at the end of this manual.

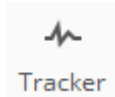
Click the “i” button in the top right corner to see the technical information about the connected Bio-Well GDV Camera device:



x Device info	
Chip ID	C8A888DD
Serial number	16011270
Initiation date	2017-04-14 09:07
Last capture date	2017-09-19 14:56
Last calibration date	2017-09-19 14:17
Total amount of scans	64
Total amount of captures	1635

*Pic. 9. Technical information window.*

When the calibration procedure is finished you will see the pop-up window with notification “Calibration complete” where you should click “OK”, and you will be automatically redirected to the Database screen.

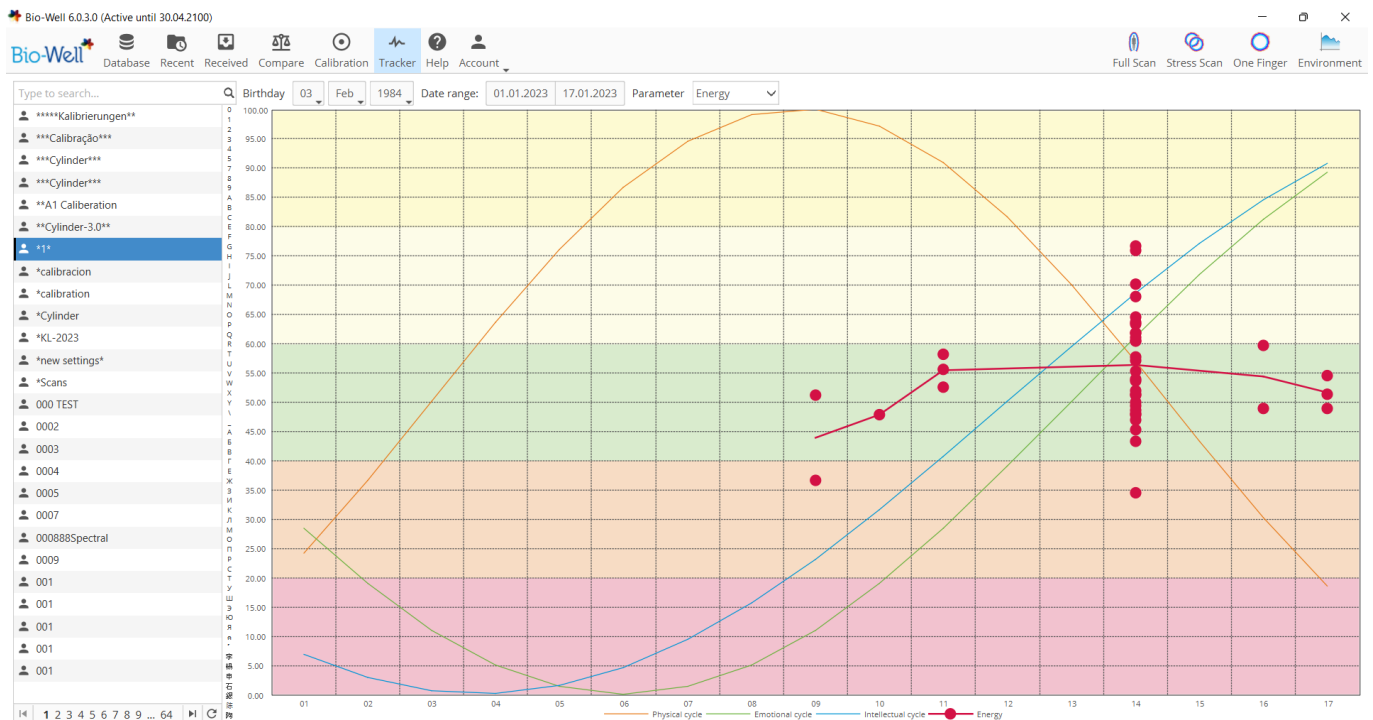


**Tracker** - subprogram that combines biorhythms with the Stress and Energy values for selected card (person). Once you click on the Tracker button you will see the list of all the Cards in your database. Select the Card for which you want to see the graph of Energy and Stress changes within time. Once the Card is selected you will see the following graph -Pic. 10.

This graph can show either Energy, either Stress values of all tests made for the selected Card within selected period of time. You can specify the time period by clicking on the starting and ending dates. It is possible to calculate the biorhythms up to 2 years upfront.

In order to see the biorhythms on these graphs you have to specify the date of birth. See the chapter devoted to biorhythms for more information.

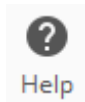
Tracker program allows you to see if there is a correlation between the Energy/Stress values and biorhythms of this given person, and also to track the changes of these two main parameters on a long distance in a more convenient way (in comparison with the Compare function).



Pic. 10. Tracker program screen.

If there were no scans made during the selected time period – the graph will stay blank and only biorhythms will be shown.

17



Help

- opens an Internet page in a default web-browser with educational materials – <https://bio-well.com/pages/manuals>.



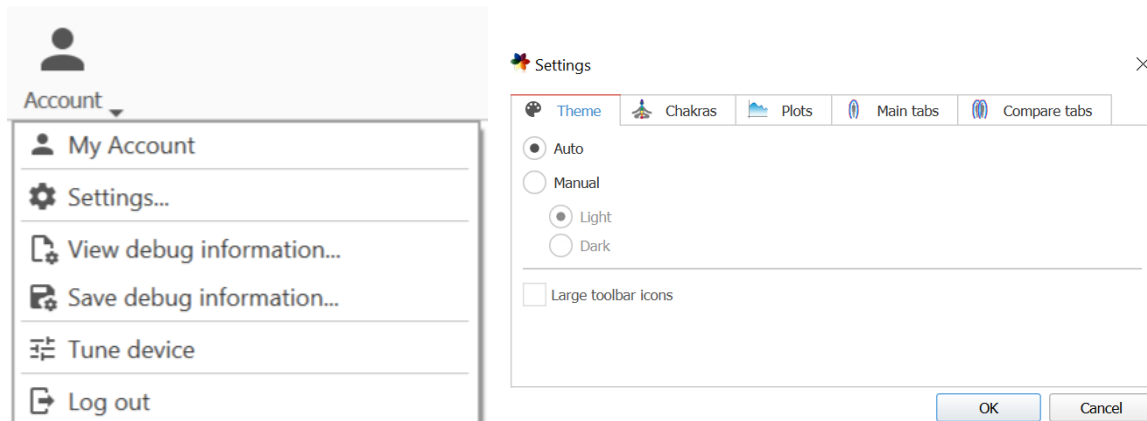
News

- informing Bio-Well users about the news on the Telegram. If there are fresh or unread news - the bell icon will become red. Once you read all the news - it will become grey. Each news will be with the link to <https://www.bio-well.com/news.html>.

It doesn't matter if you don't know English - just click the Google widget in the top right corner of the screen and select your preferred language - whole page will be automatically translated. Click "Read all" in order to mark all the news as read.

Stay updated and don't miss the news!

Account - opens a sub-menu:



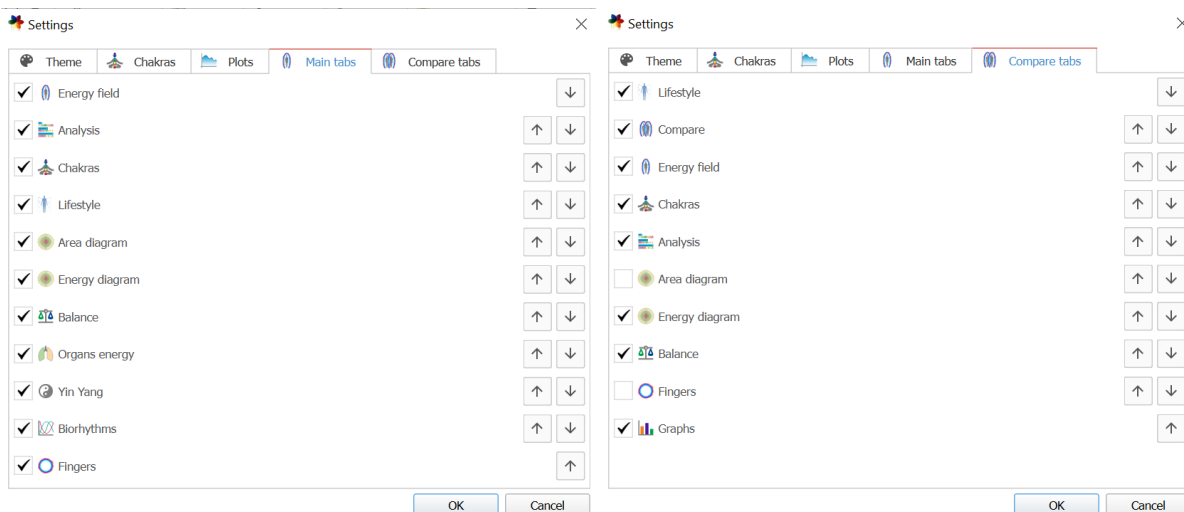
Pic. 11. Account and Settings menu.

My Account - redirects the User to [www.bwacc.com](http://www.bwacc.com)

Settings - opens the settings menu, where you can change some of parameters for comfortable works:

- Theme (dark, light or auto), increasing the size of buttons and labels;
- you can select the tab Chakras or Nerve Centers;
- set individual settings for the graphs;

- Main Tabs – allows you to change the sequence or disable tabs in the Bio-Well software for full scan mode. Move the tabs up or down the list by clicking the arrows (Fig.11-1). For example, if you don't know how to use and comment on the Yin-Yang tab, you can disable it and it won't be displayed in your interface. You can also adjust the sequence of tabs according to the interpretation method. For example, if you are a psychologist, you can use only 3 tabs: Analysis, Nerve Centers (Chakras) and Lifestyle. You can disable all other tabs, and they will not confuse either you or your customers.



Pic. 11-1. Settings menu - Main tabs and Compare Tabs.

View debug information - opens the software log (for tech-support specialists).

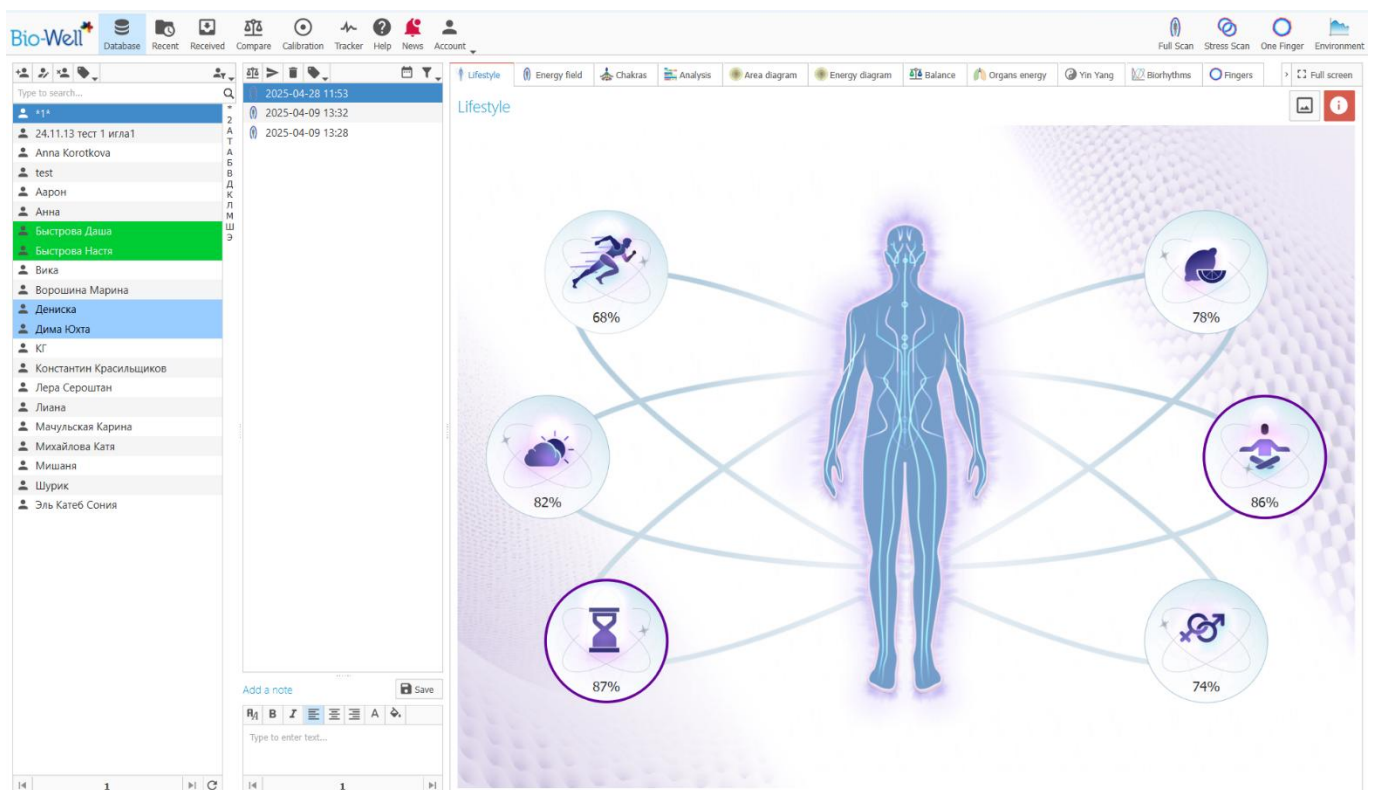
Save debug information - saves an archive for technical support issues.

Tune device- turns device into the tuning mode (for tech-support specialists).

Log out - logs out from the Bio-Well Account.

Software log is intended for the technical support by the Authorized Distributors of the Bio-Well company and is password protected.

*NB! If you need to change the language of the Bio-Well Software interface you have to log out from the account, select a new language, input password and log in again.*



19


*Main screen of the Bio-Well Software.*

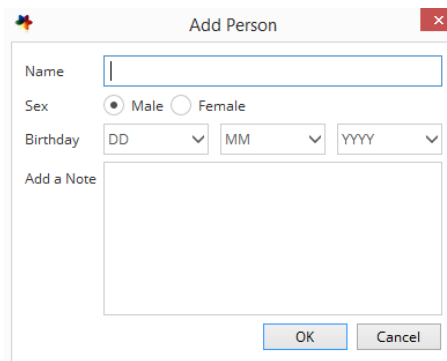
In the right side of the control panel you can find buttons for creating new scans. First you need to select the needed Card in the Cards list and then click one of the scans that you want to make: “Full scan”, “Stress scan”, “One Finger” or “Environment”.

## Database part

### Cards list

First column is devoted to the list of Cards in your database – they are listed in alpha-numeric order. You can use standard search by name window to find Cards that you need. Also you can click on a number or letter on the right side from the Cards column to do speed search.

To add a new Card click  button and a pop-up window will appear (pic. 12):



Pic. 12. Adding a new Card to your Database.

20

Name, Gender and Date of birth (DOB) are required (if a person is not willing to give exact DOB – please enter at least Year of birth and randomly select month and day).

*NB! If you will enter only year and leave day and month unselected - then even year will be automatically erased by the program once you click "OK".*

Adding notes is optional. All data will be kept in the online server Database associated with the Account (subscription). For those users who prefer or require a high degree of privacy for their clients, consider using numeric or alphanumeric identification instead of actual names.

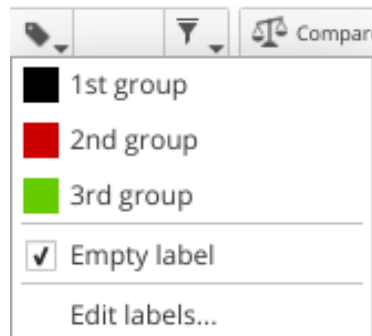
**NB! According to the GDPR law you do not have the right to input any data that will allow a third party to identify the client if you don't have a signed written consent form from your client.**

To edit already created Card – select it and click  button. Pic. 12 will be displayed.


To delete any card – select it and click  button.

In order to organize your database you can group multiple Cards together by creating and assigning labels.

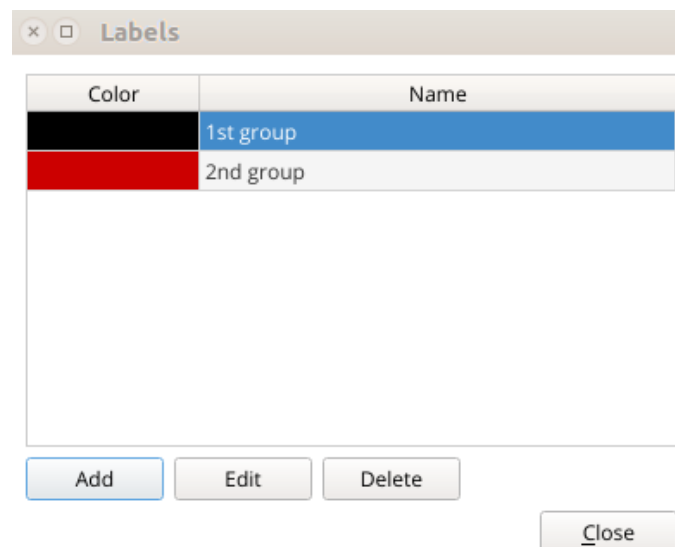
Click  button to see the list of already created labels or edit the list.



*Pic. 13. Labels menu.*

To assign a label to a Card: select a Card and click on the group that you need to assign to this Card. Name of the Card will become colored according to the color of the label. To erase previously assigned label from the Card: select a Card, click on the  button and select “Empty label”.

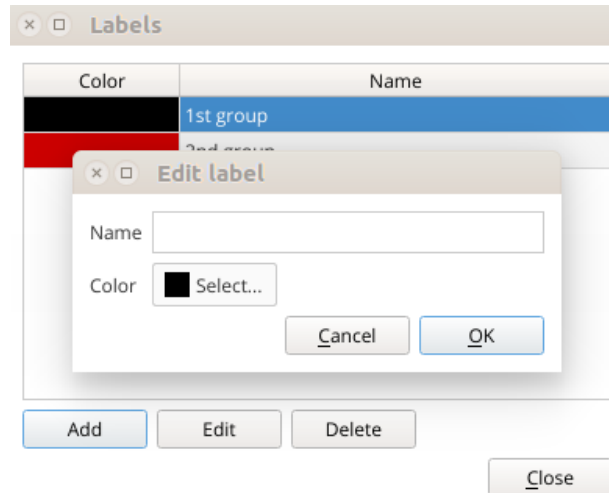
To create new labels select “Edit labels...” line. New window will be displayed (pic. 14).



*Pic. 14. Labels window.*

Here you can Add, Edit and Delete labels.


If you click Add or Edit buttons you will see next window (pic. 15):



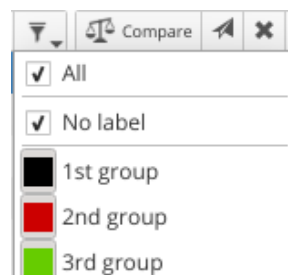
*Pic. 15. Adding and Editing label window.*

Here you need to enter the name of the label and select a color. Then click “OK” to save the label.

In order to speed up the process of working with your database you can apply filters according to the labels assigned to the Cards.

Click  button to see the drop-down menu of filtering options (pic. 16), where you can mark one or several lines (label names) – your list of Cards will be filtered accordingly to your selection. In example, if you select label “1st group” then you will see **only** Cards with this label in the list.

22



*Pic. 16. Filtering Cards drop-down menu.*

*NB! If you don't see any Cards in your list – check which lines you have marked in the filtering drop-down menu.*

At the bottom of the Cards column - page numbers and scroll arrows are available to navigate the entire list of Cards (pic. 17).





*Pic. 17. Navigation bar for the Cards list.*

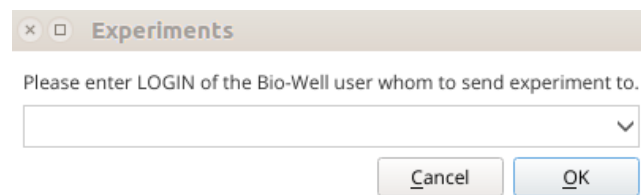
Use refresh button to update the list.

## Scans list

Second column is devoted to the list of Scans made for the selected Card. By default, the list is arranged according to the date and time of Scan creation.

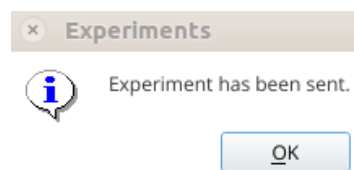
Selecting scans and experiments here you can send them to Comparison by clicking  button.

Also, you can send any scan or experiment to other Bio-Well User if you know his/her Login by selecting the Scan and clicking  button. A pop-up window will be displayed:



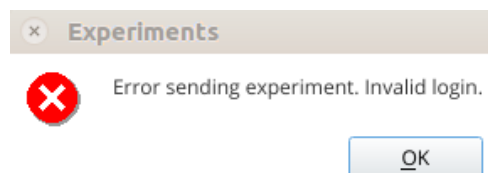
*Pic. 18. Sending Scans to other Bio-Well Users.*

Enter the Login name of the intended Bio-Well User and click "OK". If you have spelled Login correctly – you will see confirmation window:



*Pic. 19. Successful sending of the Scan.*

If you have made a mistake in the Login name – you will see error window:




*Pic. 20. Error sending a Scan to another Bio-Well User.*

If this scan was already previously sent to the specified User – you will also see the error window.

In the Scans list column you can also create labels to organize your database. It works in absolutely same way as in Cards column.

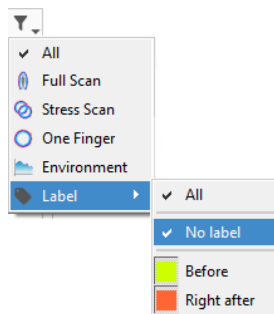
Additional features are available for searching and filtering Scans.

Click  button to search a Scan by specifying a date: day, month and year. Then only the Scans made on this date will be displayed in the list.

Filtering (click ) can be applied in a two-fold way (pic. 21):

You can filter according to the type of the Scan (“All”, “Full Scan”, , “Stress Scan”, “One Finger” or “Environment”). For example, if you select “Stress Scan” then only Scans of this type will be displayed in the list.

Also, you can filter according to the assigned labels in the same way as in Cards list column.

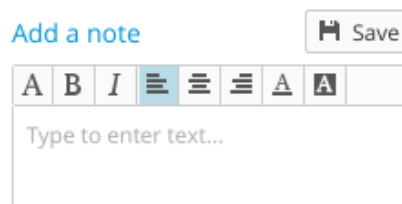


*Pic. 21. Filtering Scans drop-down menu.*

You can select more than one Scan or Card at a time, by pressing CTRL (select one by one) or SHIFT (to select all Scans or Cards between two highlighted) keys on your keyboard. This allows you to speed up the process of working with your Database, like sending Scans to Compare or assigning labels to Cards or Scans, etc.

24

At the bottom of the Scans column you can find a special area devoted to adding notes to any Scan you like (pic. 22).



*Pic. 22. Adding a note to a Scan.*

There are standard word editing tools available.

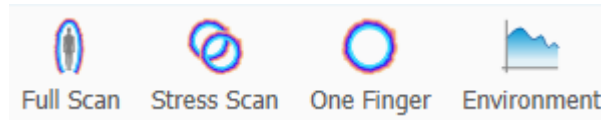
Whenever you add any note – please remember to click “Save” button after that, otherwise your notes will not be saved on the server.

Enter any information that you think is appropriate for defining the conditions at which the Scan was made.

## Creating a new Scan/Experiment

Right part of the Main screen of the Bio-Well Software is devoted to the representation of the results and creating new Scans.

In the right top corner you can click “Full Scan”, “Stress Scan”, “One Finger” or “Environment” buttons to create a new Scan of a selected type.



*NB! If your Subscription is not paid (your Bio-Well account is not Active) then software will not allow you to make new Scans. You will get a message at the top of the screen “In order to make new scans please pay your subscription”: Please pay the Subscription first – then conduct new Scans.*

## Preparing person for the examination

1. There should be no watches, rings (that he/she wears only in the daytime) and other metal objects on the hands.

2. Client should not have pacemakers.

3. Client has not had myocardial infarction.

4. Client has not eaten within the previous 1.5-2 hours.

5. Client has not washed hands (especially with soap) right before the measurement.

6. During menstruation and  $\pm$  2 days from it EPI/GDV data can be significantly perturbed for women.

7. Client does not have long nails (long nails will not allow person to position fingers correctly on the glass electrode).

\*BW 3.0 has an extra space at the top of the glass electrode and more flat orientation of the glass surface that allows to capture people even with long nails.

8. Ask about any medication that client takes as it greatly affects the results.

*NB! If your client has washed his/her hands (or had to wash them) before the examination please ask him/her to dry them properly and wait for 15-20 minutes to restore the biochemistry of the skin.*

## Rules of capturing fingers

Try your best to make the inscribed ellipse of each finger as close to the circle as it is possible and position it in the center or upper part of the electrode (this is your guarantee of correct finger positioning and further on – of more accurate analysis).

Try your best to make capture immediately after the client has put the finger on the electrode (fingers become sweaty very fast without ventilation and the results will be distorted).

Bio-Well 3.0 device has an in-built ventilator that is able to ventilate the area around the finger. If the fingers are hot or sweaty, or the humidity is high in the place where you work with your Bio-Well 3.0 device – turn the ventilator ON. You don't need to turn it OFF – it will be turned off automatically after 1 minute. Ventilator of BW 3.0 device can be turned ON before the start of any Scan – use “Fan ON” button in the top right corner.

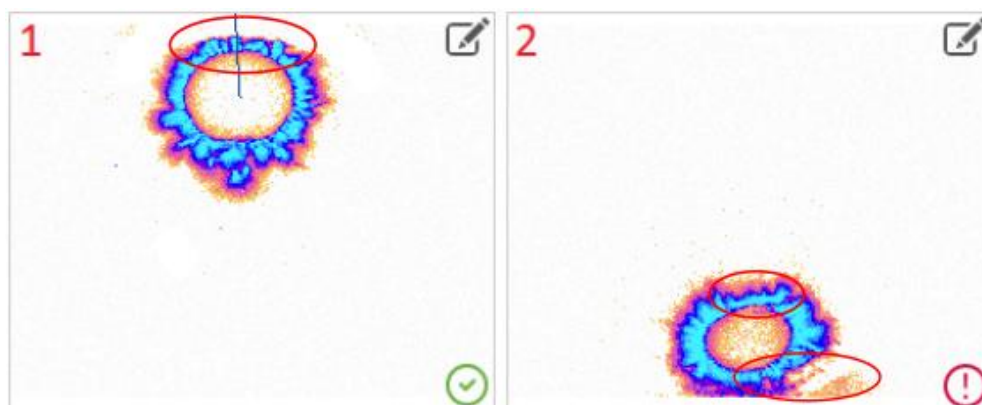
BW 2.0 also has an in-built ventilator, but it ventilates only the internal part of the device in order to protect it from the excessive humidity in the environment and evade condensation of water at the internal side of the glass electrode.

*NB! Take into consideration that Bio-Well GDV Camera 1.0 is going to the stand-by mode after 10 seconds since last capture. It will need about 5 seconds to react on your click on the “Capture” button in order to return to the active mode. BW 2.0& 3.0 donot go to a stand-by mode and are always ready to capture.*

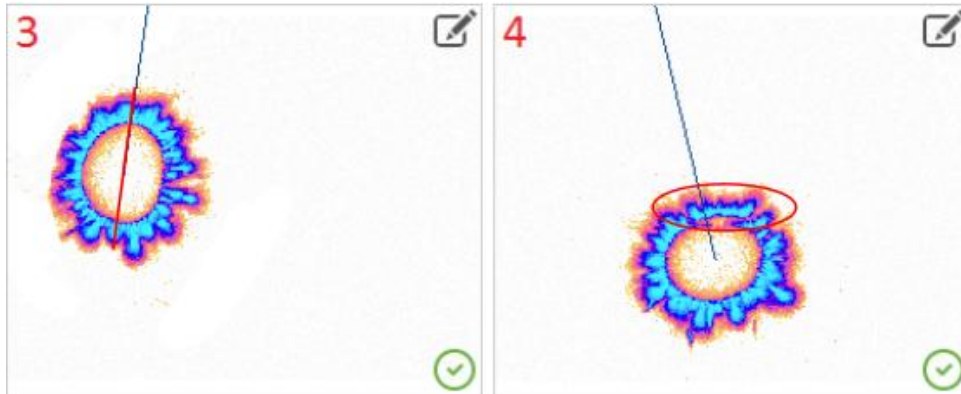
26

If the fingers are very hot or sweaty, please clean (for example with napkin) each finger right before capture and the electrode after each finger.

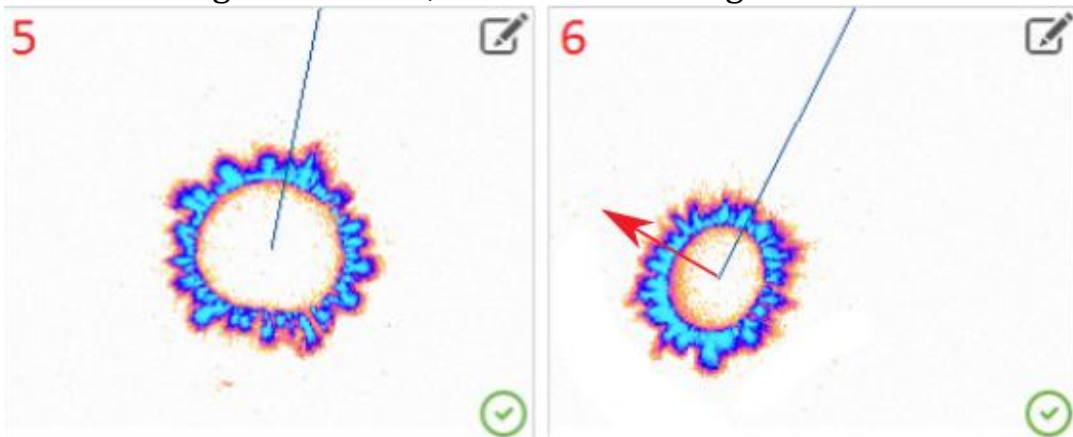
Below you can see various examples of how same finger can be captured



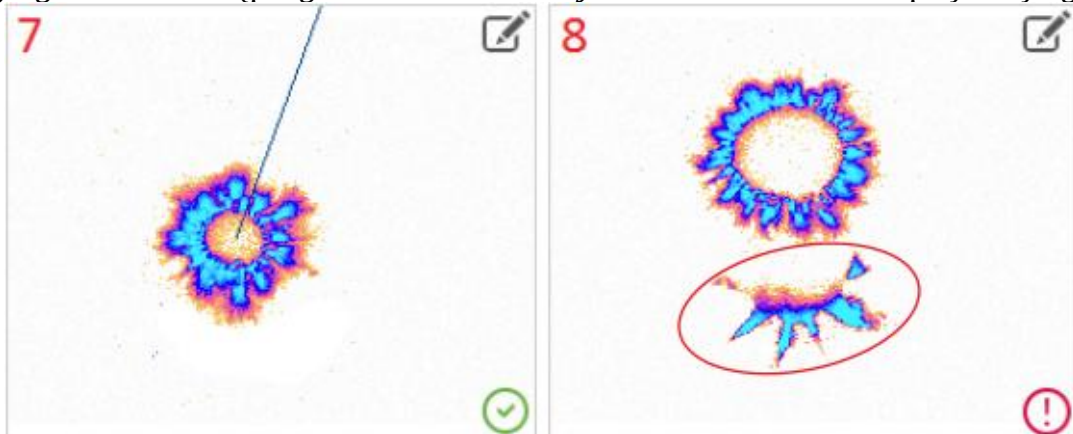
1 – finger is too high so the emission is being cut; 2 – finger is too low, reflection from the walls & the nail can be seen.



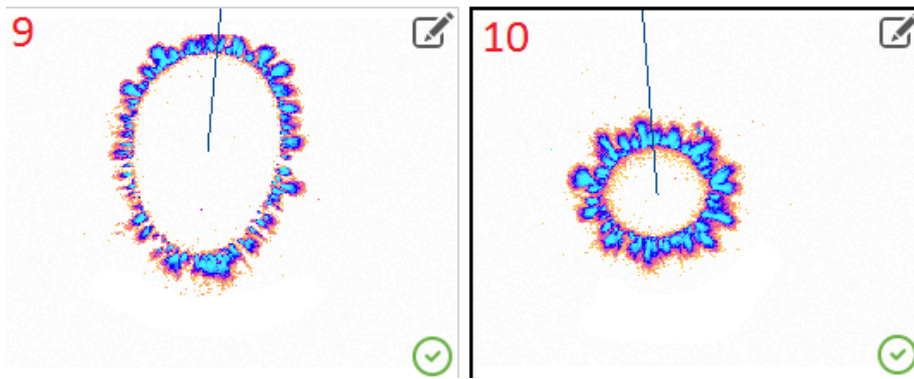
3 - finger is skewed; 4 - nail is touching the electrode.



5 - too high pressure (inscribed ellipse is too big [depends on the size of the actual finger]);  
6 - finger is rotated (program can't correctly derive where is the top of the finger).



7 - too low pressure (inscribed ellipse is too small);  
8 - external light at the bottom that should be erased (to edit - click the pencil sign on the top right corner of the image or simply double-click at any place on the image).




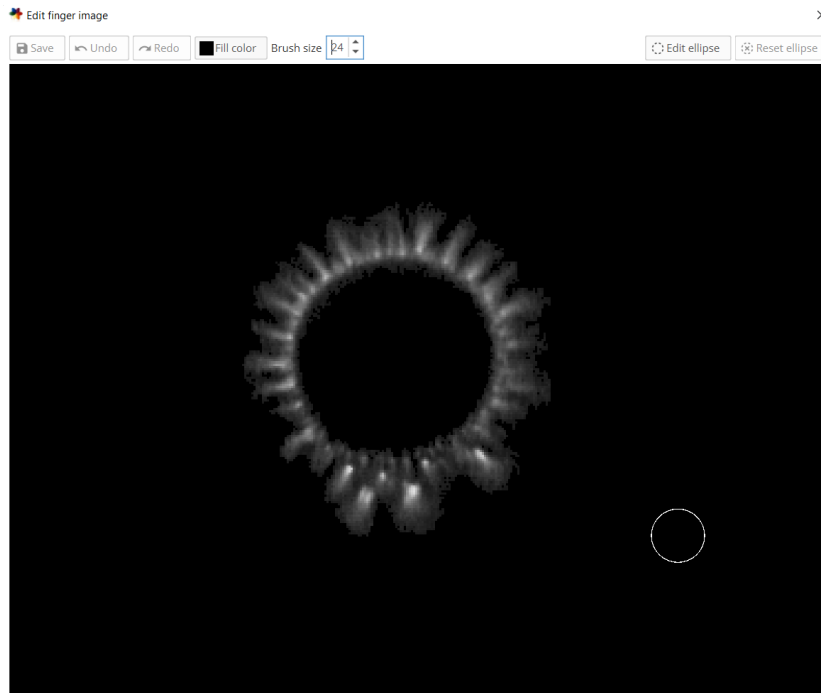
9 – finger is touching not with the tip, but with the whole phalanx;  
10 – ideal position of the finger.

*Pic. 23. Examples of how same finger can be captured*

Try your best to have all fingers captured as №10 on the pic. 23. The finger should be: in the center or the upper part of the image, inscribed ellipse should be as close to the circular shape as possible and shouldn't be too big or too small, there should be no traces of nail, no external light, blue line should point at the top of the finger and deviate maximum 30 degrees from the vertical position and it should cut the inscribed ellipse into two symmetric parts.

28

If you see any external light on the GI or you want to correct the position of the blue line – double click on any place of the image or click the  sign in the top right corner of a GI. A new pop-up window will be displayed (pic. 24).

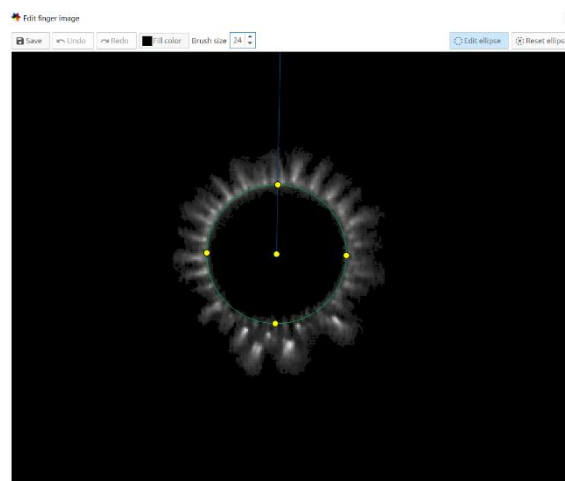


*Pic. 24. Editing Glow Image window.*

Here you can edit the image and delete the noise from it – click and hold left mouse button and you will erase the part of the image under the mouse. By default, the size of the brush is set to 24 pixels, but you can adjust it if needed on the top panel of the window (selected size will be saved). You can Undo and Redo changes that you apply. Also, you can select other color of the brush, but in regular work it is not needed. Please remember that you need to click “Save” button in order to apply changes that you have made, otherwise window can be closed, but the GI will stay the same.

29

If you need to edit the position of the blue line (from which all the sectors will be derived) click “Edit ellipse” button in the top right corner. Design of the window will be changed and you will see ellipse, blue line and 4 yellow dots for rotation of the ellipse together with the blue line (see picture below).



*Pic. 25. Editing ellipse of the image.*

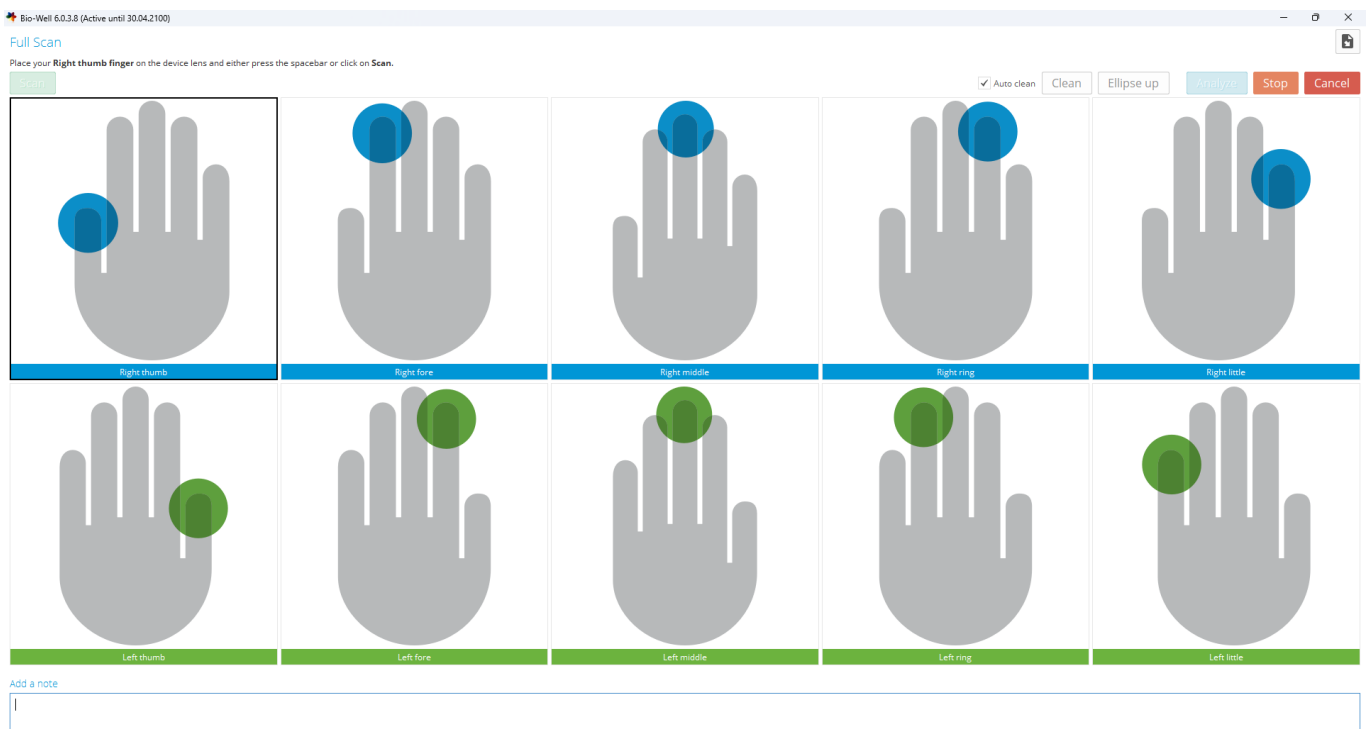
In order to rotate the ellipse –hover the mouse upon one of the yellow dots, click and hold the left mouse button, then move the mouse to the needed direction – ellipse and the blue line will adjust accordingly.

If you want to undo the changes in the ellipse orientation – click “Reset ellipse” button.

## Conducting a “Full Scan”

Select a Card in which you want to make a “Full Scan” and click “Full Scan” button in the right top corner of the main screen to create a new Scan. Special interface will be displayed (pic. 26).

Place each finger one by one on the glass electrode and click green “Scan” button in the top left corner or press spacebar on the computer keyboard. Then place next finger and repeat the operation. Time interval between captures for BW 1.0 is 5 seconds and for BW 2.0& 3.0 is 1 second. At the bottom of the screen you can add notes about the Scan that you are making. It will be displayed in the Notes section (pic. 21) when you select this Scan in your database.



*Pic. 26. Interface for conducting “Full Scan”.*

In order to get the reliable data on the Bio-Well device a specialist should control the positioning of the fingers on the glass electrode. Only if you know that all fingers were captured correctly you can really rely on the parameters calculated automatically by the Bio-Well Software program. If Bio-Well server is not able to define the top of the finger it will not show the blue horizontal line on the GI and red exclamation mark will

be displayed (see pic. 23). In such case you need either to recapture the finger or erase the noise from the image. To recapture any image click on it and click “Scan” again – image will be recaptured.

When you capture the last (10th) finger system will make an automatic check of the captured GI. It will check fulfillment of 5 rules:

1. GI of the thumb should be equal or bigger than other fingers on one hand.
2. GI of the little finger should be equal or smaller than other fingers on one hand.
3. Index (Fore), middle and ring fingers should have almost equal size (20% deviation is possible).
4. Same fingers on right and left hands should be almost equal (15% deviation is accepted).
5. Blue line (showing the top of the finger) should deviate no more than 30° from vertical position.

If one or several rules are not complied then a red-colored note will appear above the Glow Images explaining what should be fixed and red exclamation marks will appear in the corresponding fingers images windows. Please recapture these fingers until you get green ticks for all 10 fingers.

31

*NB! If the Bio-Well software is not able to derive the position of a blue line on one of the fingers – then it will be impossible to Analyze such a capture. Find the finger without a blue line and recapture it again.*

If a person doesn't have one finger – then you can capture same finger from the opposite hand instead of it.

If you are using BW 3.0 and if the fingers are hot and sweaty or/and the air is very humid and hot – turn on the ventilator by clicking “Fan” button in the top right corner. It turns ON the fan for 61 seconds. If no new images are made – fan will turn off automatically after expiration of 61 seconds.

Do not click “Analyze” button until you get all 10 fingers captured correctly. Once you click it – images can no longer be edited.


It is highly recommended to keep the “Auto clean”  Auto clean  function always turned ON. It cleans the images from the external noise pixels automatically, but sometimes when the noise pixels are too close to the glow of the finger – they are not deleted automatically, so you need to erase them yourself manually.

Please check that “Auto clean” function is turned ON during calibration and scanning fingers.


Do not leave any external noise pixels on the images as they will spoil the calculation of results!

If you have switched the “Auto clean” mode OFF – you can click “Clean” button in order to automatically perform the cleaning of all 10 images.

In rare cases you can notice that blue lines are drawn incorrectly from your point of view (if you have big experience with Bio-Well already) – in such cases you can click “Ellipse up” button to make all the blue lines vertical on all 10 fingers. By default, it is better to rely on the automatic detection of the blue line.

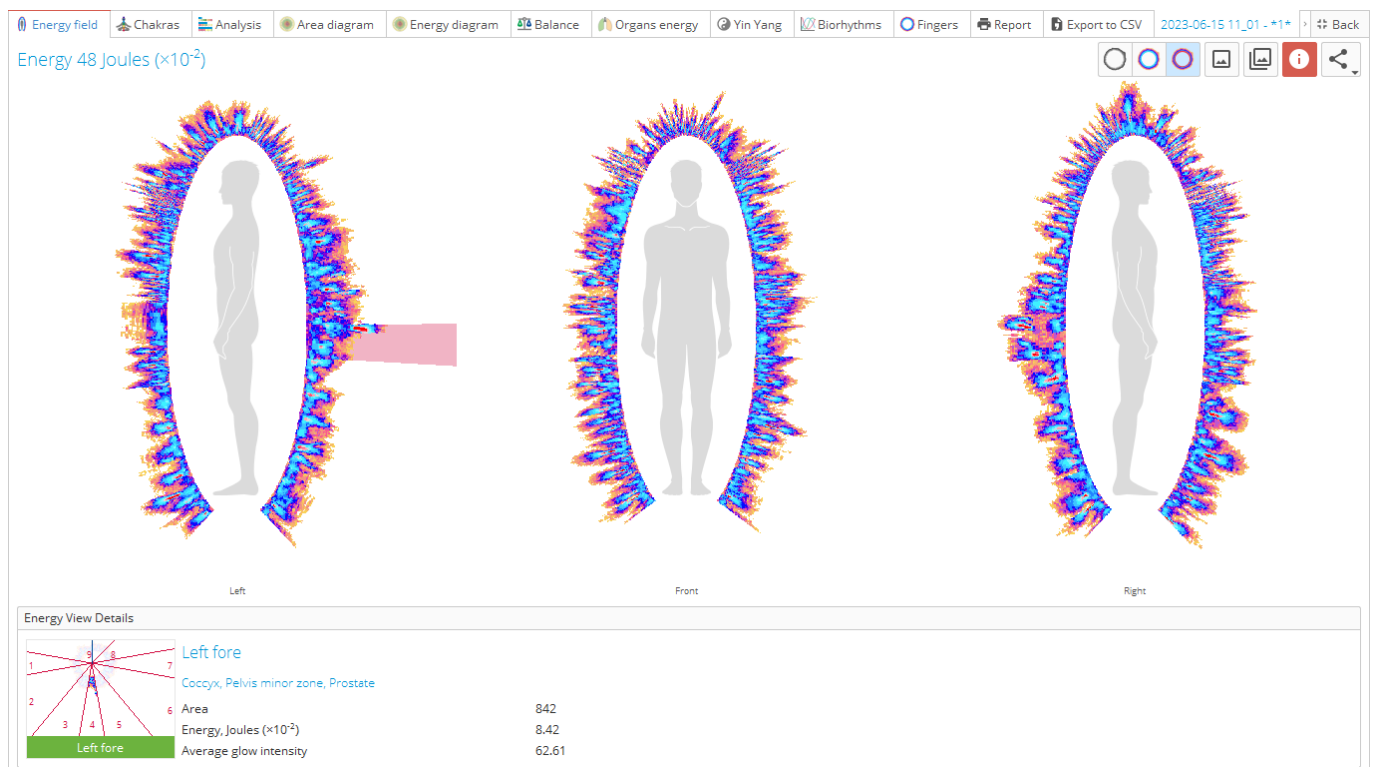
For the users of old GDV camera models it is still possible to import images captured not inside the Bio-Well software by clicking the  button and specifying the folder with needed BMP files.

## “Full Scan” results

Select any “Full Scan” (marked with  sign) from your database. Results of the Scans that you select in the Scans list are automatically downloaded from the Bio-Well Server. When you select multiple Scans at a time by using CTRL or SHIFT buttons on your keyboard – results of all the selected Scans are going to be downloaded one-by-one. “Full Scan” mode provides the most wide spectrum of parameters about human functional (energetic) state from all other modes of capturing available.

*NB! If you get an error message while trying to load some of the previous scans – it means that your antivirus program is blocking the interaction of the software with the Bio-Well server. Please add an exception for the Bio-Well software in your antivirus program.*


As a result of the “Full Scan” you will get several tabs (subprograms) with various representation of the calculated results. In case you didn't enter date of birth – then “Biorhythms” tab will not be displayed.



Pic. 27. “Full Scan” results preview.

Depending on the resolution of your monitor (screen) you will see all tabs or only some of them. If you don't see some of the tabs you can click on the small button with the arrow sign near the “Full Screen” button and select the tab that you want.

Also, you can enlarge the screen by clicking “Full Screen” button – then all the tabs will be displayed and the database part will be invisible.

You can click the “Info” button  on every tab in the software in order to read the brief information and interpretation about that particular tab in the pop-up window.

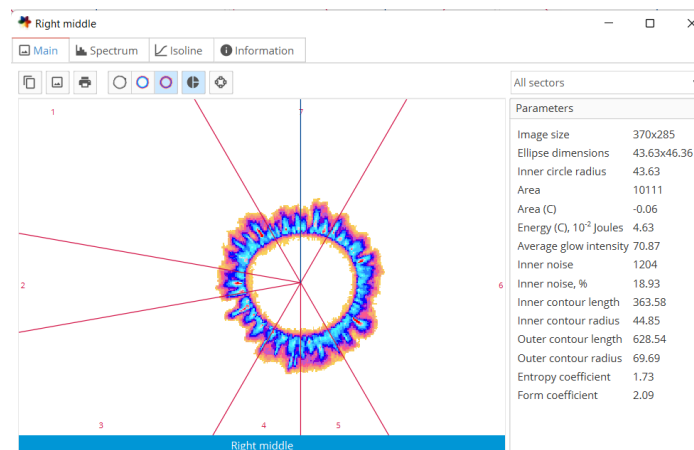
## Energy Field tab

Presentation of front and side views of the Energy field is just a computer modeling. Various sectors are grouped around the figure of the human body. Most of them are placed in the part of the body where the actual organ is, but not all of them.

*NB! Please note that sectors at the level of legs (of the human figure) are not devoted to legs at all. Please point on them to see that they are connected with cardiovascular, nervous and immune systems sectors, coronary vessels, etc.*

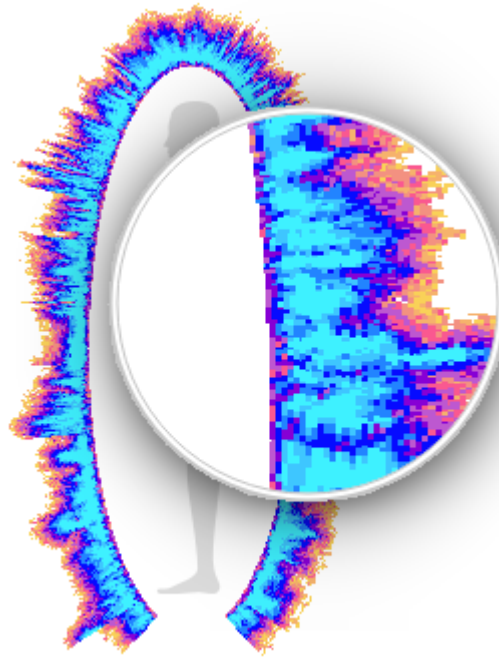
Pointing the cursor to the various areas of an image enables sector-views of the fingers as they correspond to different parts of the body – look at the bottom part of the screen where the actual sector of the finger and glow parameters are represented. Left-clicking on any sector will open a new window with the finger on which this sector is present (pic. 28).

34



Pic. 28. Selected sector preview in a separate window.

If you right click with your mouse on the glow around the human figures — magnifying effect will be applied (pic. 29).



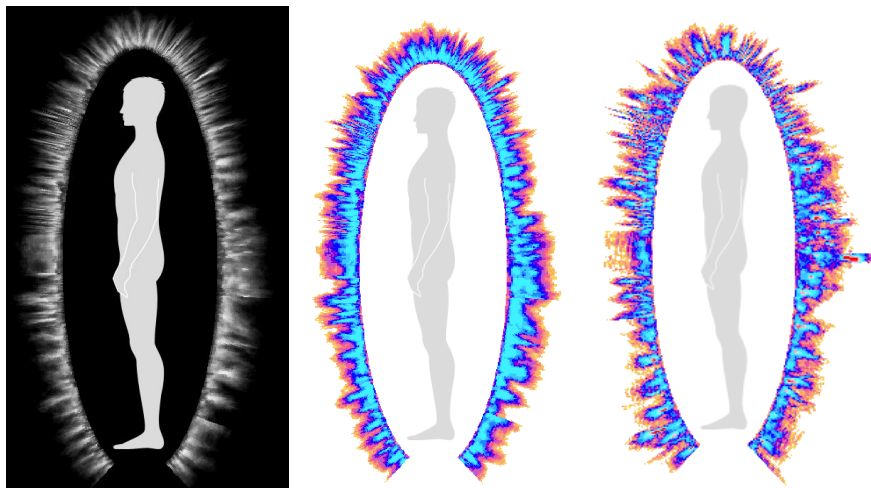
Left

*Pic. 29. Right-click to use the loupe.*

You can select any of the 3 available coloring modes: grey-scale, standard or

35


contrast palette - 





Grey-scale is the original image photographed by the Bio-Well camera.

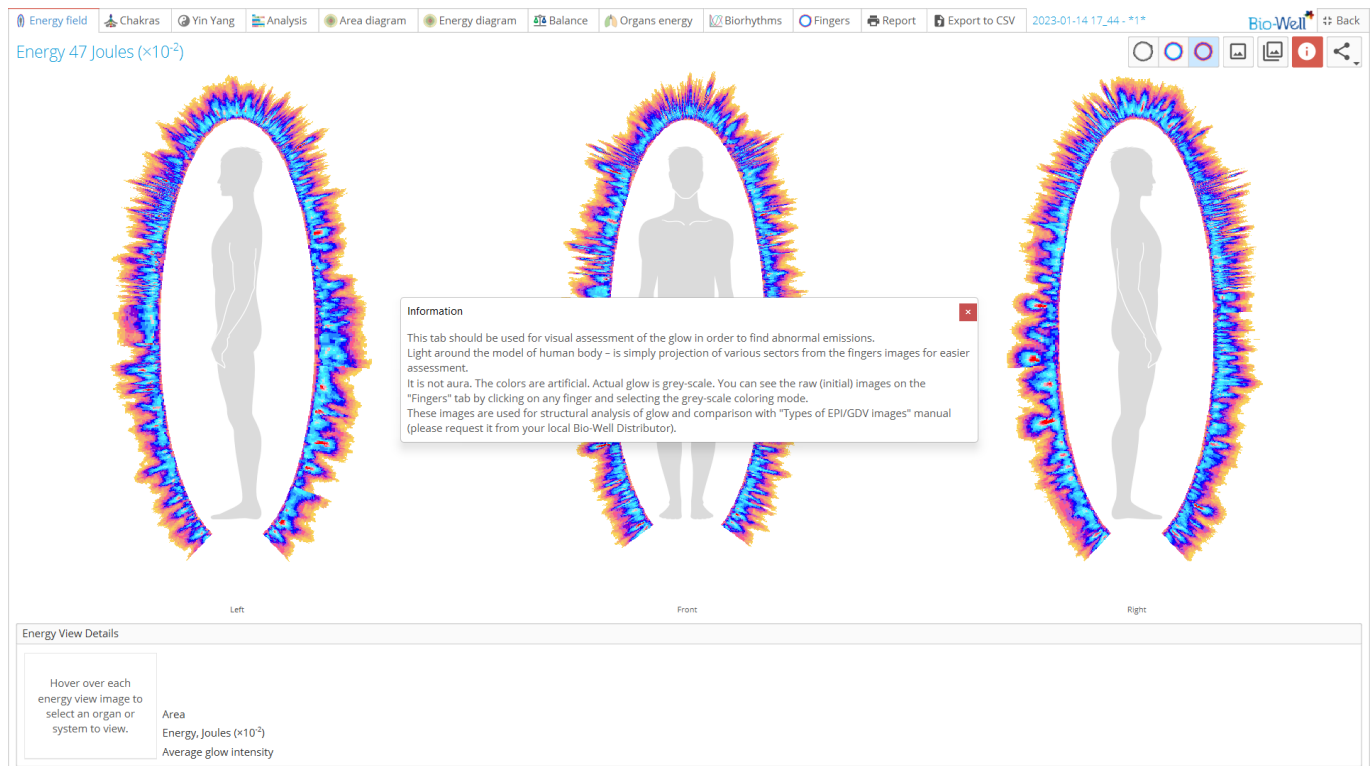
Energy palette consists of 10 colors: from light-blue (highest intensity) till yellow (lowest intensity).

Contrast palette adds 4 more colors in the highest intensity part of the spectrum in order to highlight with the red color the most intensive emission.

If you want to save the image of the Energy Field – click  button in the top right corner and specify the folder in which you want to save it.

It is also possible to save images from all the available tabs in one move – click the  button and specify the folder in which you want to save them.

Click the “Info” button  in order to read the brief information about this tab in the pop-up window (see example below).



Energy 47 Joules ( $\times 10^{-2}$ )


Information

This tab should be used for visual assessment of the glow in order to find abnormal emissions. Light around the model of human body – is simply projection of various sectors from the fingers images for easier assessment.

It is not aura. The colors are artificial. Actual glow is grey-scale. You can see the raw (initial) images on the "Fingers" tab by clicking on any finger and selecting the grey-scale coloring mode.

These images are used for structural analysis of glow and comparison with "Types of EPI/GDV images" manual (please request it from your local Bio-Well Distributor).

Area	Energy, Joules ( $\times 10^{-2}$ )	Average glow intensity

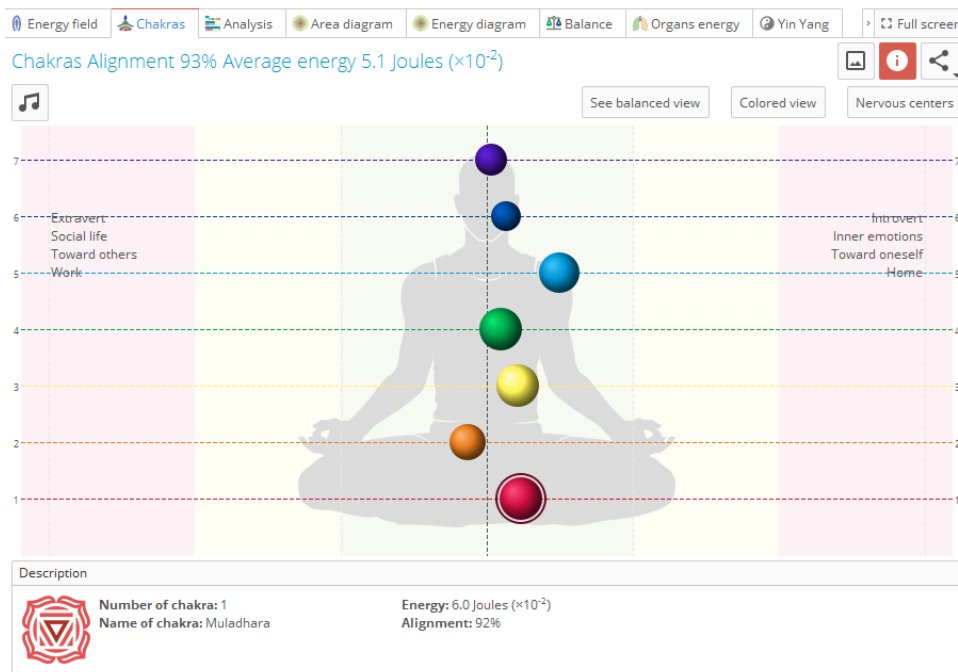
Click “Share”  button if you want to send the image of the Energy field to E-Mail, post on Facebook, Twitter or Telegram.

There is Energy parameter value present on the top of this tab. Norms can be found in the “Analysis” tab.

## Chakras/Nervous centers tab

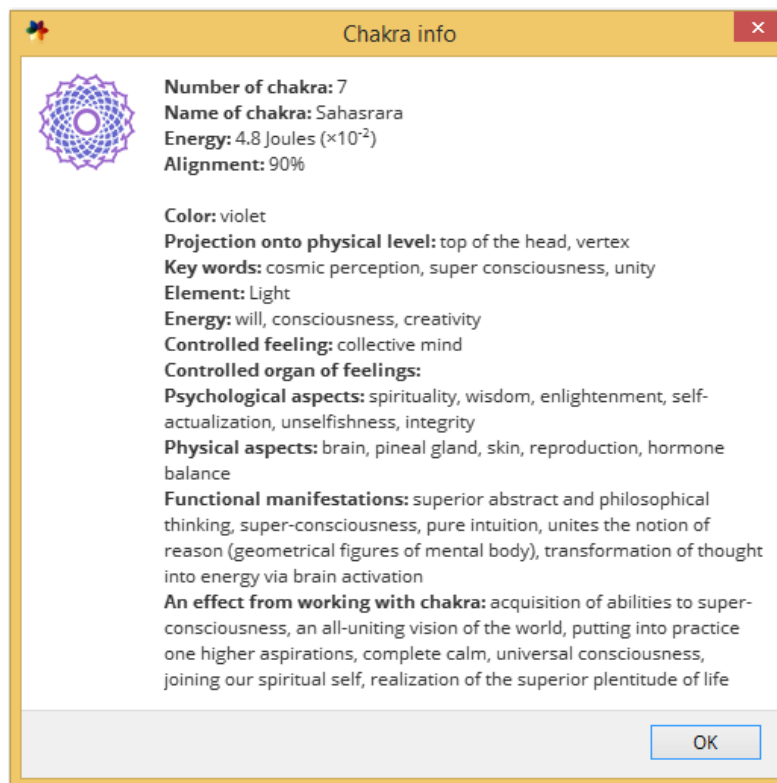
Based on Auyurvedic principles 10 fingers images are processed in a specific way to assess the chakras (energy centers) state. Each chakra (energy center) has two main parameters: Alignment (ratio between left and right glows of specific sectors on fingers) and Energy (energy of the glow of corresponding sectors). Hover mouse cursor over any chakra to see these 2 parameters and name of chakra in the Description field (at the bottom of the screen) (pic. 30).

If you don't feel resonance with "chakra" word - you can switch to the Nervous centers view. Interpretation will also be changed accordingly.



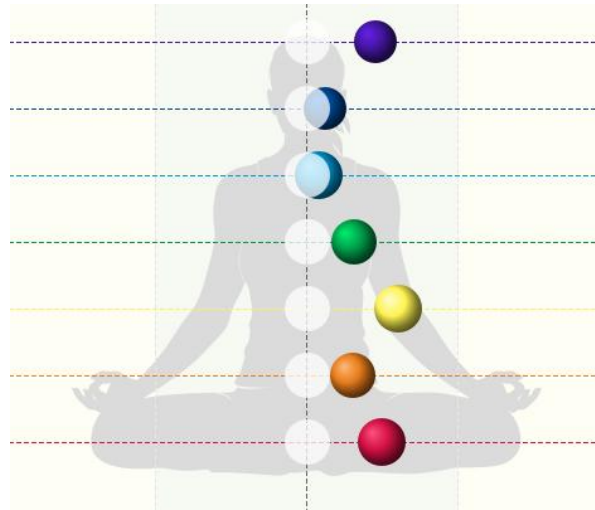
Pic. 30. Chakras tab view.

Click on a particular Chakra to see the full standard description (pic. 31).



Pic. 31. Chakra standard description.

Click [See balanced view](#) button to see ideal positioning of chakras (pic. 32).



*Pic. 32. Balanced view of chakras.*

There is a possibility to change the background picture by clicking “Colored view” button.

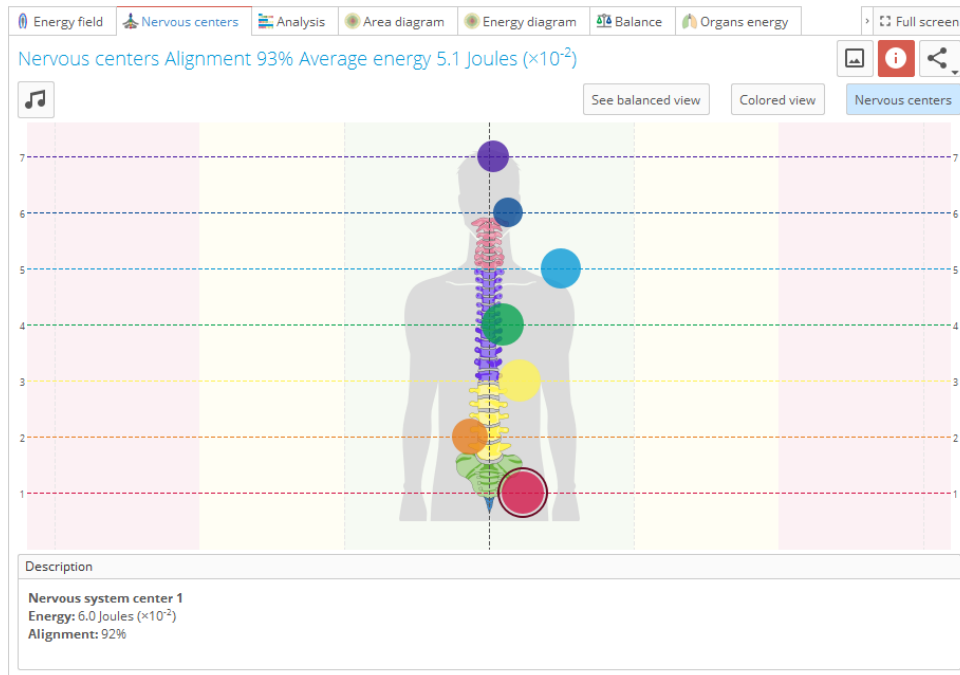
38

*Pic. 33. Colored view.*

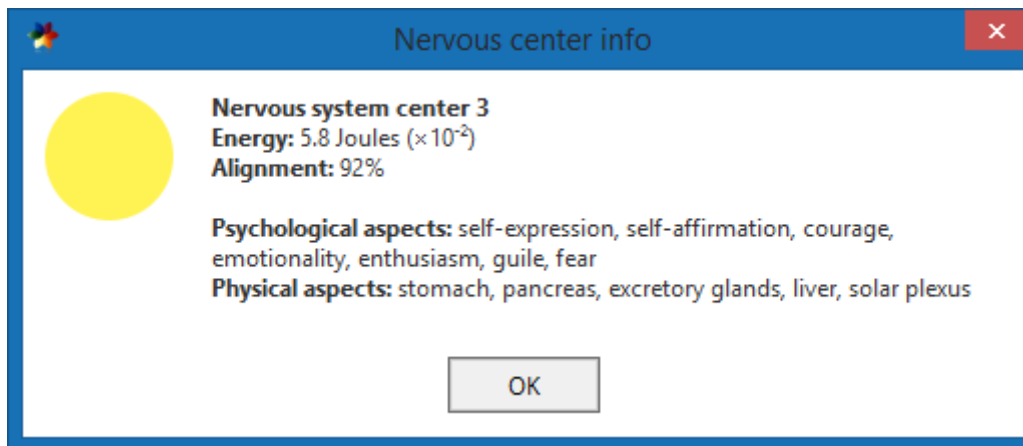
Nothing else is changed – only the background image.

If you click “Nervous centers” button –the background picture will change and the name of the tab will change too.


Each nervous center has an interpretation that can be viewed by clicking on specific center.





Pic. 34. Nervous centers view.




Pic. 35. Nervous centers basic interpretation window.

The “Create Music” button  generates a unique music file which may be saved to be used with a Bio-Cor device. See Bio-Cor manual for more information.

If you want to save the image of the Chakras tab – click  button in the top right corner and specify the folder in which you want to save it.

Click the “Info” button  in order to read the brief information about this tab in the pop-up window.

Click “Share”  button if you want to send the image of the Chakras to e-mail or post it on Facebook, Twitter or Telegram.

## Yin Yang tab

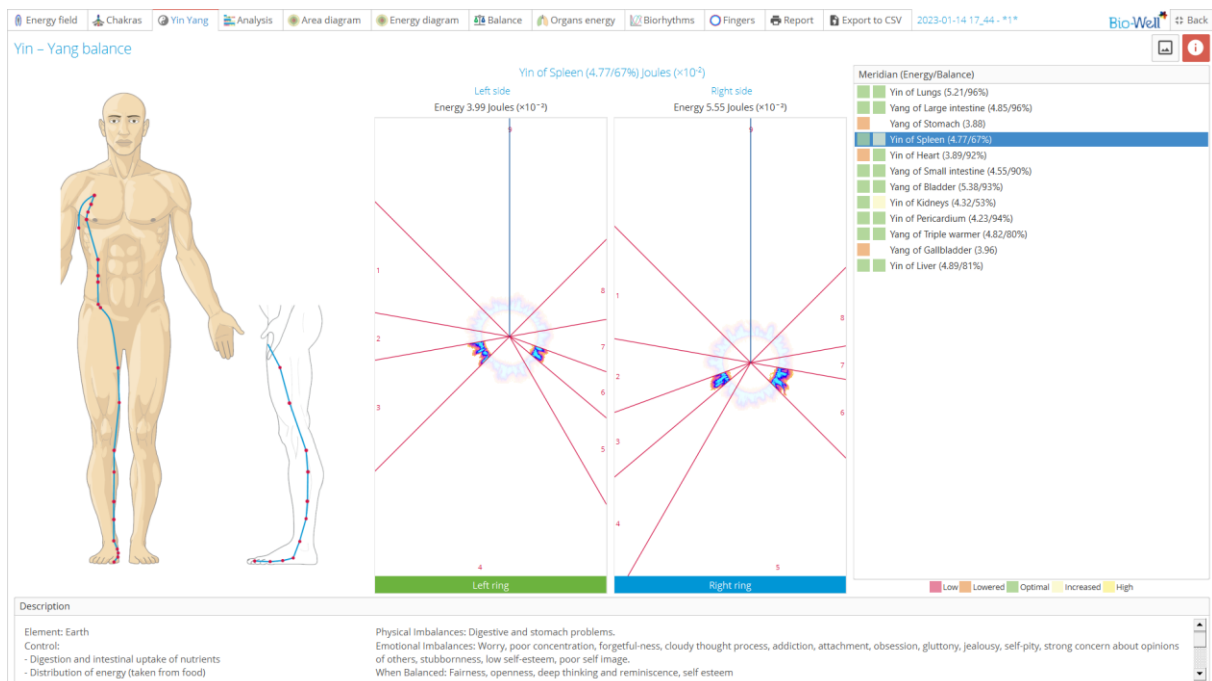
Yin Yang tab represents energy parameter values for all 12 channels of energy meridians (pic. 36).

*NB! Yin Yang meridians energy values are experimental parameters that are not properly tested yet. After statistical analysis of the obtained data made these parameters will be refined.*


Click on any of the energy meridians names and you will see the details: sectors on specific fingers that are related to the selected meridian and their energy values, and in the bottom field – brief description. Near each meridian name you can see colored squares: left one represents Energy value, and right one – Balance. At the end of the line you can see actual values of Energy and Balance in brackets. Color is selected according to the norms of Energy and Balance, see the grid at the bottom of the list.


40

Pic. 36. Yin Yang meridians tab.



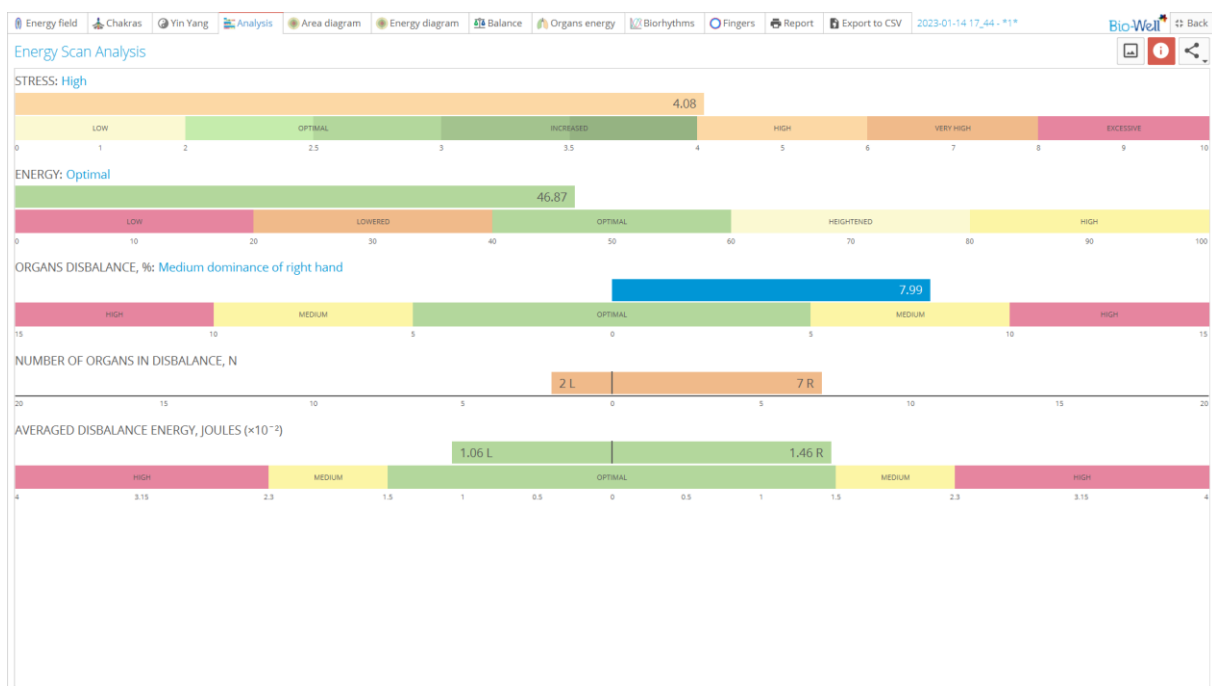
In case of stomach and gallbladder meridians, Balance value is not given as there is only one sector on 1 hand – that is why it is impossible to calculate Balance.

If you want to save the current image of the Yin Yang meridian – click  button in the top right corner and specify the folder in which you want to save it.

Click the “Info” button  in order to read the brief information about this tab in the pop-up window.


## Analysis tab


Main integral parameters of the person’s functional (energetic) state are represented on this tab (pic. 37): Stress, Energy, Organs Disbalance, Number of organs in disbalance and Average disbalance energy. Disbalance parameters are directly connected with the Balance tab.



Pic. 37. Analysis tab view.

Each parameter has its own norms and colored grid.

If you want to save the image of the Analysis tab graphs – click  button in the top right corner and specify the folder in which you want to save it.

Click “Share”  button if you want to send the Analysis bars to e-mail or post it on Facebook, Twitter or Telegram.

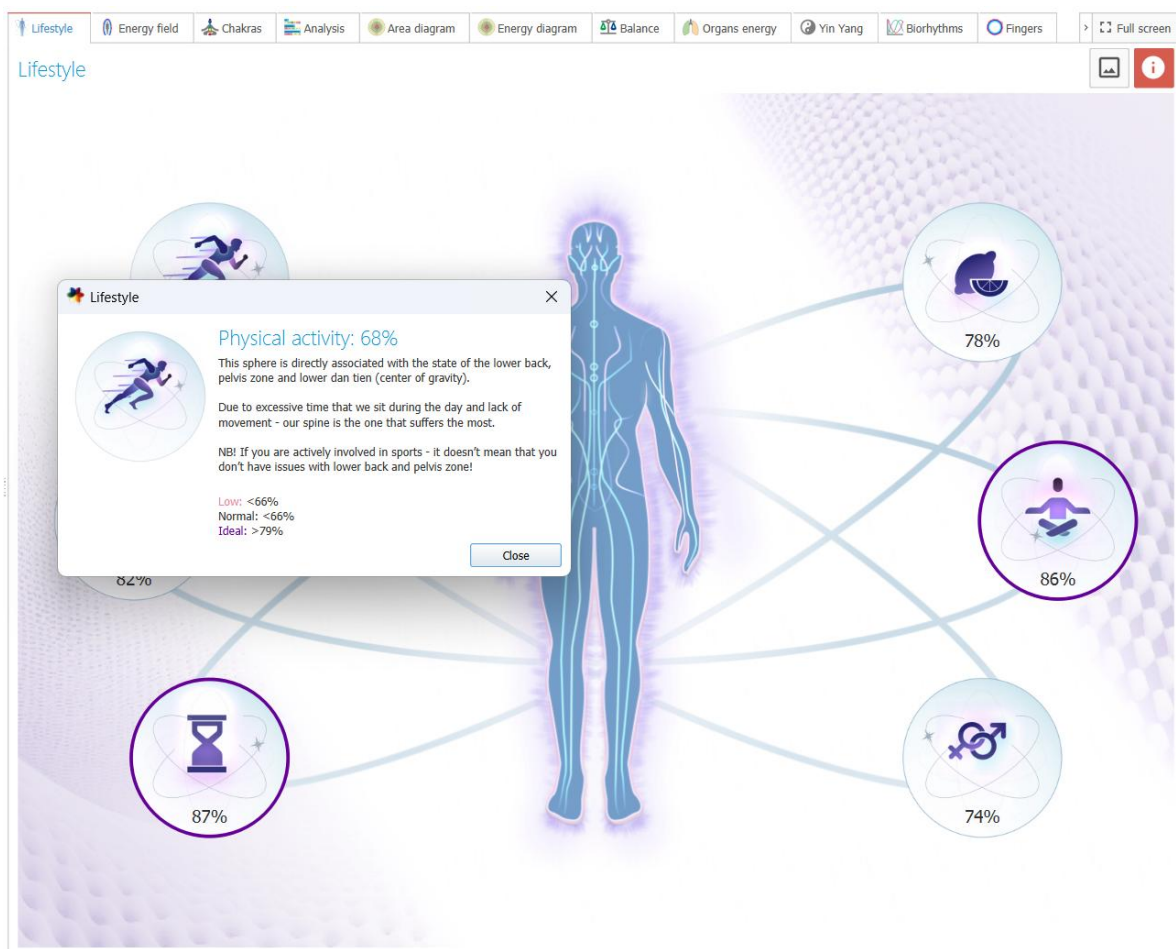
## Lifestyle tab

This tab will ONLY appear for scans made in Bio-Well software version 6.0.11 and higher. The Lifestyle tab shows the 6 areas of life that most affect stress, energy, and

balance: physical activity, nutrition, psychology, hormonal activity, daily routine, and the environment.

These six spheres are interconnected and form the basis of energetic and physiological health. Research in biomedicine and biophysics suggests that the interaction between these factors determines the efficiency of cellular metabolism, intercellular communication and the dynamics of the body's complex systems. Bio Well is a noninvasive assessment tool that identifies imbalances in these spheres, facilitating a comprehensive and personalized approach to health optimization. Integrating healthy habits in each of these dimensions enhances longevity, cognitive performance and emotional well-being, promoting a holistic balance in daily life.

With a full scan, the Bio-Well program will automatically calculate how close the condition is to 100% (optimal condition) in each area of life. The area with the lowest value should be the top priority when changing your lifestyle. Move the mouse cursor over the sphere and you will see the name. Click on the sphere to see a pop-up window with a brief description. You can also find a description in the report.



Pic. 38. Lifestyle tab

***Lifestyle tab norms***

<b>Sphere f lifestyle</b>	<b>Low</b>	<b>Normal</b>	<b>Ideal</b>
Physical activity	<66%	66-79%	>79%
Environment	<78%	78-91%	>91%
Nutrition	<69%	69-81%	>81%
Psychology	<74%	74-85%	>85%
Daily routine	<75%	75-86%	>86%
Hormones	<72%	72-85%	>85%

***Description of the Spheres of Life that Influence Health and Energy***

**Sphere 1: Physical Activity**

Description: Physical activity is a fundamental pillar for maintaining homeostasis and regulating the body's biochemical processes. From a physiological point of view, exercise improves blood and lymphatic circulation, optimizing cellular oxygenation and the elimination of metabolites. In the context of bioenergetics, movement influences the dynamics of the body's electromagnetic fields, especially in the lumbar area, sacrum and pelvis, where important nerve plexuses such as the sacral plexus are located. In Bio Well, we can analyze how insufficient or excessive physical activity generates imbalances in body energy and affects the autonomy of the nervous system.

43

**Sphere 2: Environment**

Description: Environmental exposure influences health through epigenetic and neuroimmunomodulatory mechanisms. Factors such as air pollution, chronic noise, and electromagnetic radiation can trigger systemic inflammatory responses and affect the body's homeodynamics. Studies in psychoneuroimmunology suggest that the quality of the environment impacts the hypothalamic-pituitary-adrenal (HPA) axis, modulating cortisol release and immune response. In Bio Well, the respiratory system is observed to be reflected in the third and fourth fingers of the electrophotonic image, allowing us to assess how the environment influences body energy. Creating an environment free of contaminants and with a harmonious energy charge is essential for comprehensive health.

**Sphere 3: Nutrition**

Description: Nutrition directly influences mitochondrial functionality and ATP production, key to the bioenergetic dynamics of the body. An adequate balance of macronutrients and micronutrients favors neuronal plasticity, the health of the intestinal microbiome, and hormonal regulation. In Bio Well, it is observed that organs

such as the liver, kidneys, pancreas and gallbladder reflect the nutritional and metabolic status of the individual. Research in the field of nutrigenomics has shown that proper nutrition regulates gene expression and modulates inflammatory processes that influence longevity and well-being.

## Sphere 4: Psychological and Mental State

Description: Mental and emotional health is intrinsically linked to the regulation of the autonomic nervous system and neuroendocrine activity. Chronic stress, anxiety or depression can activate the HPA axis, altering the release of catecholamines and glucocorticoids, which negatively impacts neuroplasticity and modulation of the immune system. In Bio Well, it is observed that emotional imbalances influence the coherence of the energy field and the distribution of activity in the chakras. Training in relaxation, meditation and neurofeedback techniques helps regulate the neural circuits associated with emotional regulation and psychological resilience.

## Sphere 5: Daily Regimen

Description: Circadian rhythms are essential for hormonal regulation and synchronization of physiological processes. The pineal gland plays a key role in the secretion of melatonin, the hormone responsible for regulating the sleep-wake cycle and immune function. Sleep schedule imbalances, exposure to blue light at night, and rotating shift work affect the homeostasis of the central nervous system. In Bio Well, the impact of the daily regimen on the bioenergetic field can be assessed through the activation of regions such as the prefrontal cortex and eyes, which reflect the state of fatigue and cognitive load. Adjusting biological rhythms through appropriate habits improves hormonal regulation and metabolic efficiency.

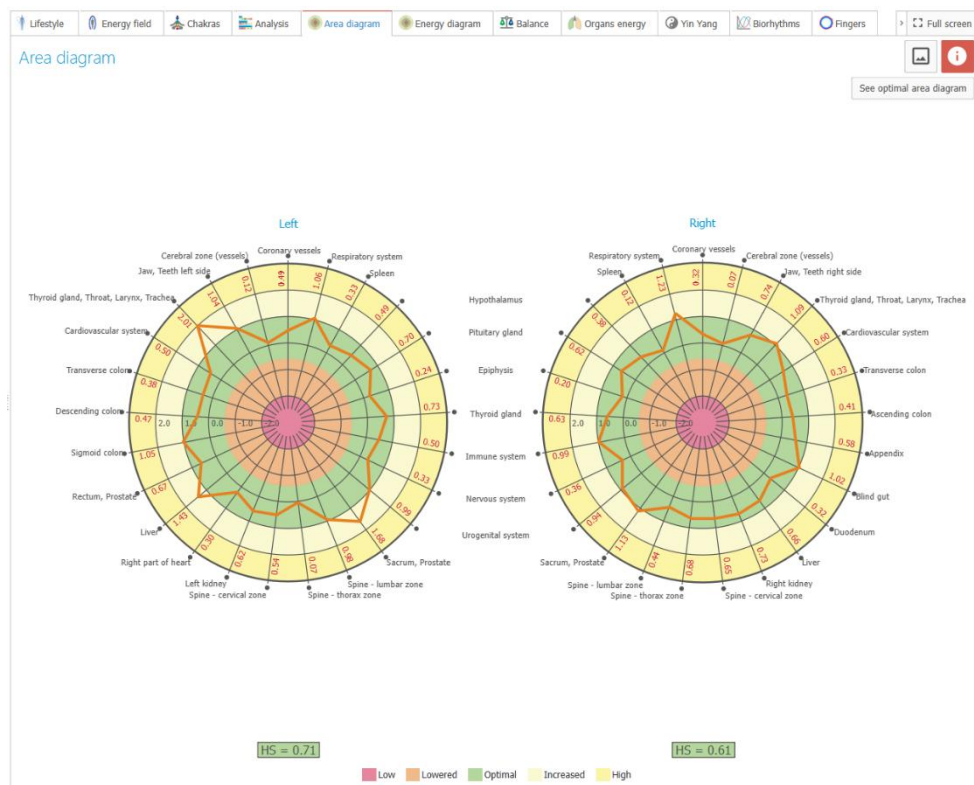
44

## Sphere 6: Hormonal Activity

Description: Hormones play an essential role in regulating metabolism, stress response, and emotional balance. The relationship between the hypothalamus-pituitary-gonadal axis and endocrine balance is crucial for vitality and general well-being. In men, the health of the prostate and urogenital system can be an indicator of hormonal dysfunctions, while in women, the regulation of estrogen and progesterone directly impacts the homeostasis of the reproductive system. In Bio Well, patterns of energy imbalance associated with hormonal alterations can be observed. Modulating these imbalances through strategies such as physical activity, functional nutrition and stress control contributes to maintaining endocrine health.

## Area diagram tab

Area diagrams for the left and right hands (pic. 39) are derived from the ratio between Area parameter value of a specific sector on the finger and calibration cylinder sector of the same size multiplied on a special coefficient. If these values are almost equal (0÷0.4 on the diagram) for all sectors – then it is optimal functional condition (click “See optimal area diagram” button to see it (pic. 40)). Not all the organs and systems are represented on this diagram. Actual ratio value for each sector is represented in red colored numbers at the outer border of the diagrams.



Pic. 39. Area diagram tab view.

Coloring grid is applied: yellow – higher than norm, green – norm, orange and pink – lower than norm.


Same coloring grid is applied to the HS integral parameter that is represented at the bottom of the screen for each hand.

Borders of green zone are different for different age groups:

- Below 20 years upper border is 1.3;
- From 20 to 60 years upper border is 1.0;
- More than 60 years upper border is 0.6.



Pic. 40. Optimal Area diagram button activated.

If you want to save the image of the Area diagram – click  button in the top right corner and specify the folder in which you want to save it.

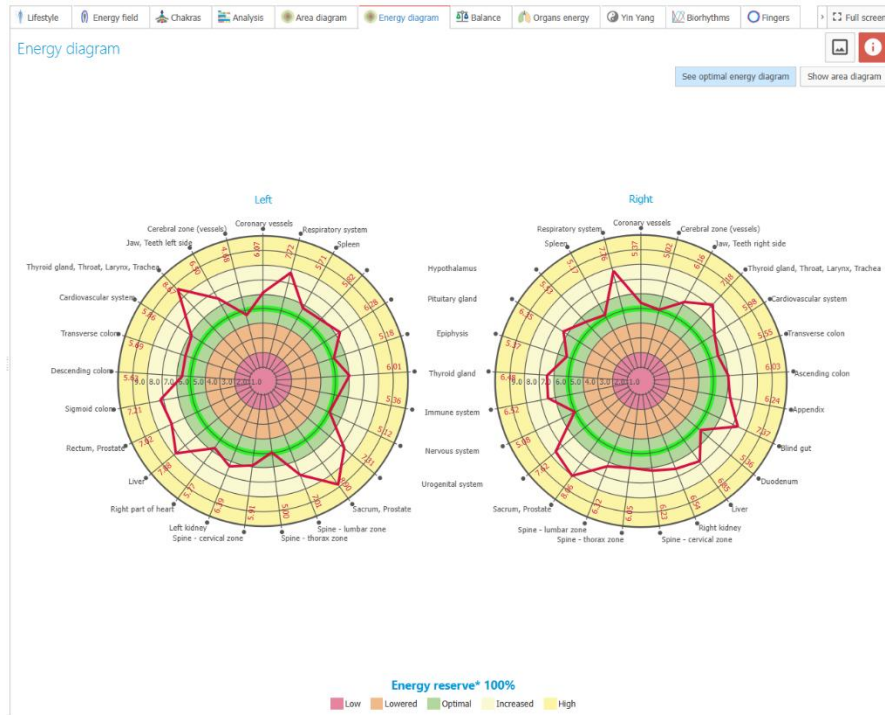
## Energy diagram tab

Energy diagrams for the left and right hands are based on the Energy parameter value for specific sectors on the fingers (same set as on Area diagrams). Maximum value for each sector is 10. Even if actual value of Energy parameter for any sector is higher than 10 – on these diagrams it will be represented at the border ( $10 \cdot 10^{-2}$  Joules).

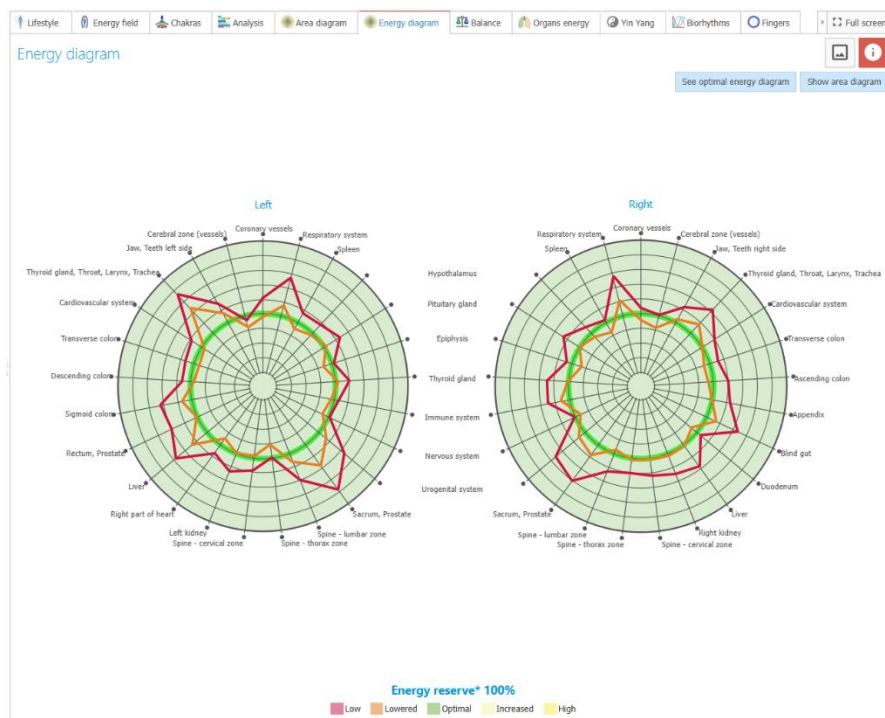
Energy Reserve parameter (experimental) is represented at the bottom of the diagrams in %.

Click “See optimal energy diagram” button to see the optimal diapason.

Energy diagrams are derived from Energy parameter while Area diagrams are based on the ratio of the Area parameter, so the essential difference between them is the Intensity of the Glow. To see the relative assessment of the Intensity parameter influence click “Show Area diagram” button and see the gap between the overlaid diagrams (absolute value of the gap has no meaning, only relative comparison can be applied) (pic. 42).




Pic. 41. Energy diagram tab view with optimal diapason activated.



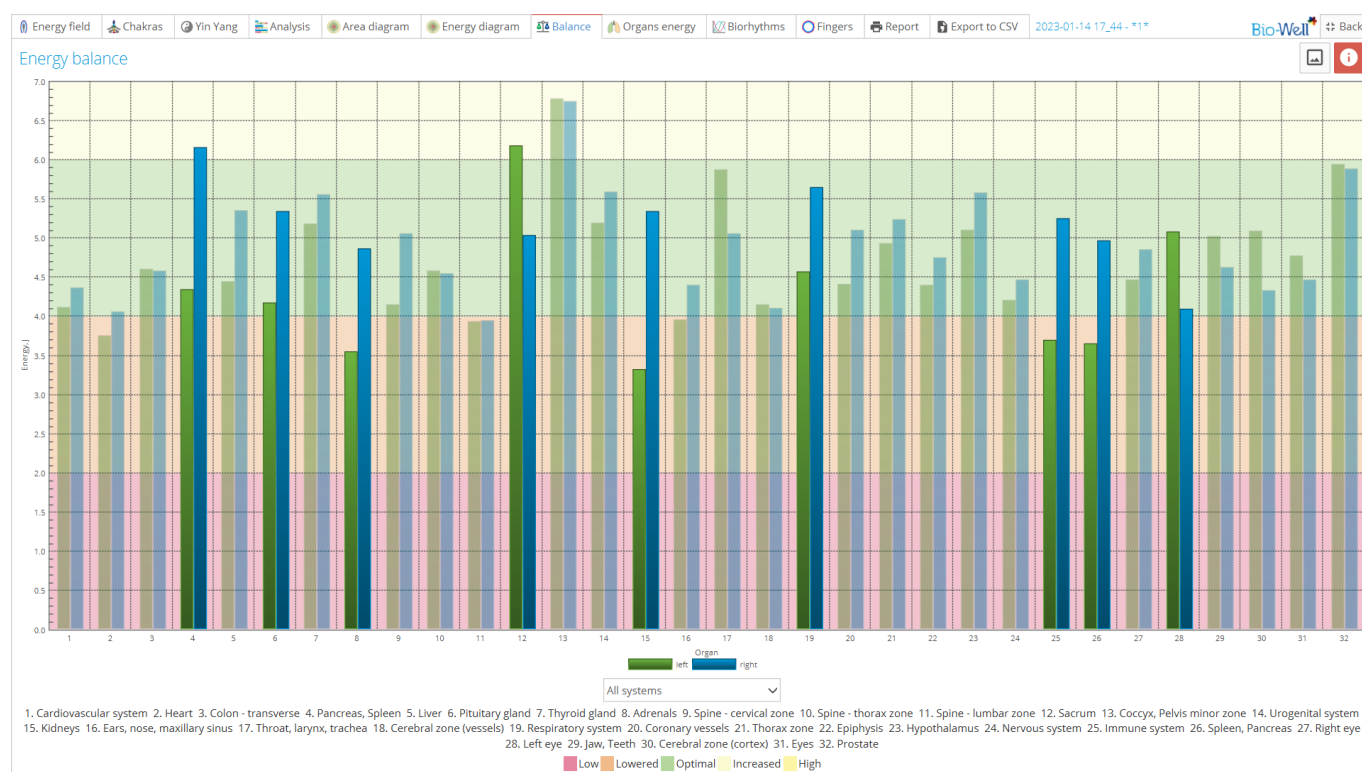
Pic. 42. Energy diagram and Area diagram overlaid.

Sectors with much bigger gap than average (for the given scan) will be highlighted with yellow, while sectors with much smaller gap will be highlighted with red.

If you want to save the image of the Energy diagrams – click  button in the top right corner and specify the folder in which you want to save it.

## Balance tab


On the Balance tab you can see the Energy value of sectors for systems and organs that are present on both hands. A significant imbalance (more than 20%) will be presented as highlighted bars. Colored grid on the background is the same as on the Energy diagram tab.



*Pic. 43. Balance tab view.*

Click on “All systems” field with arrow and you will be able to select specific system from the drop-down list.

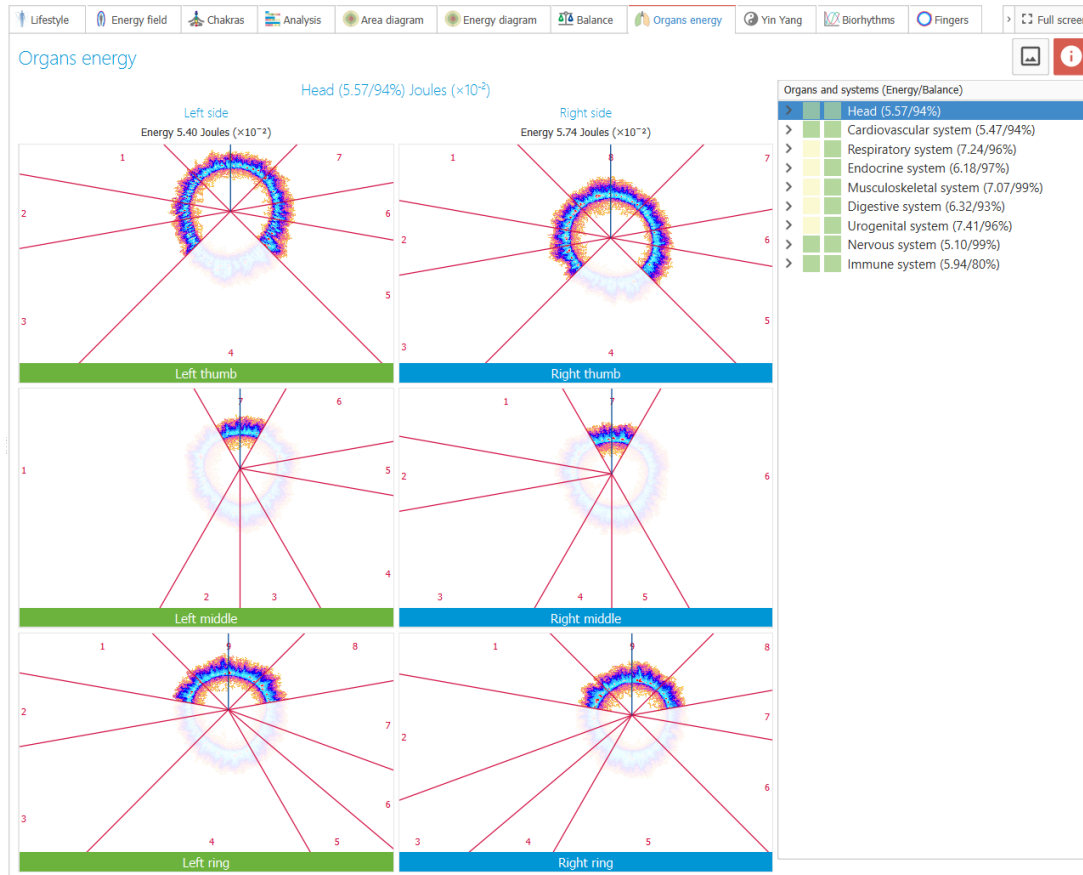
X-Axis numbers are corresponding with the list of all organs and systems at the bottom of the graph. Y-axis is for Energy value.

If you want to save the image of the Balance graph – click  button in the top right corner and specify the folder in which you want to save it.

## Organs Energy tab

Organs Energy tab is based on the same data as previous two tabs: Energy diagram and Balance – Energy values of sectors + Balance value.


Near each system or organ name you can see colored squares: left one represents Energy value, and right one – Balance. At the end of the line you can see actual values of Energy and Balance in brackets. Color is selected according to the norms of Energy and Balance, see the grid at the bottom of the list.



Pic. 44. Organs Energy tab view.

On the right side you can see the list of all the systems where you can click on the arrow near any system and you will see the list of sectors included into this system.

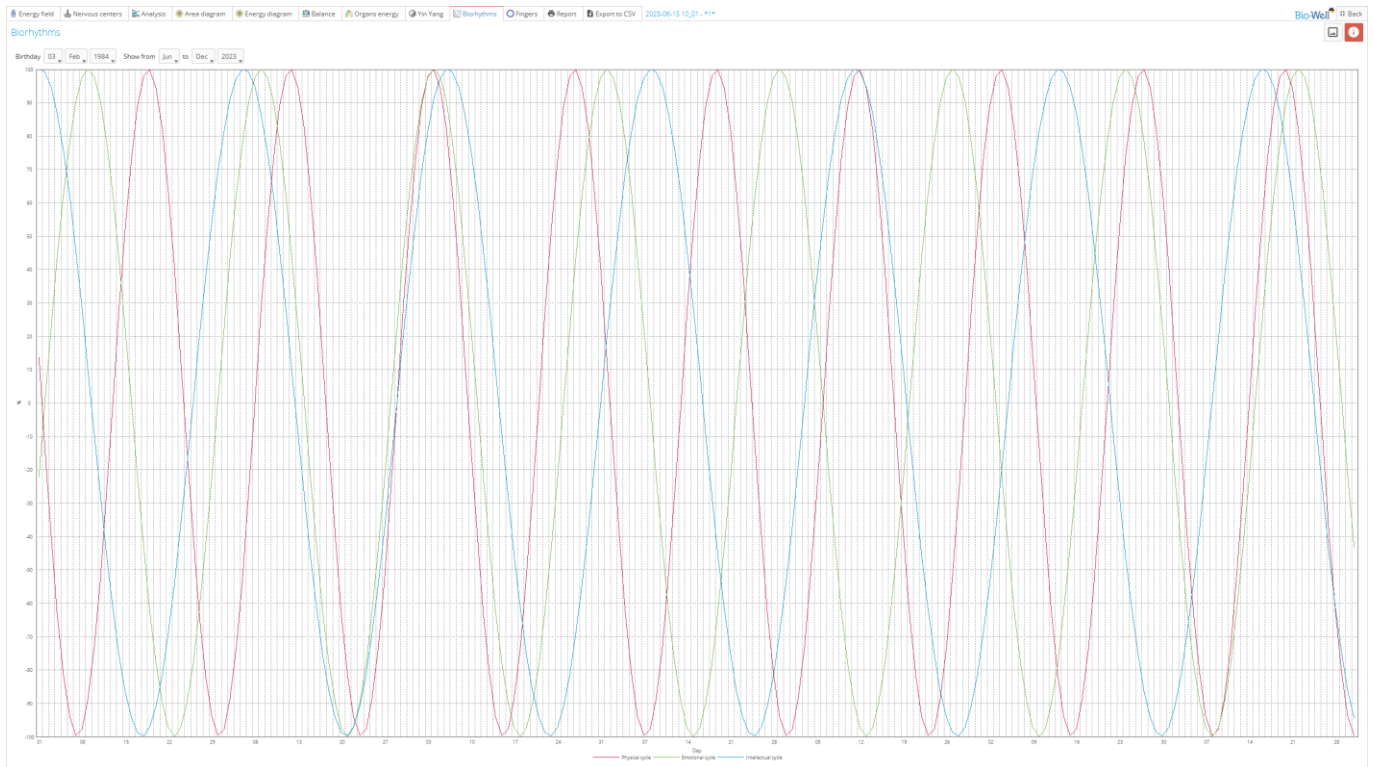
*NB! Note that for digestive system some of the organs do not have Balance value – it is because there is only 1 sector on 1 of the hands – henceforth it is impossible to calculate balance.*

If you want to save any image from the Organs Energy tab – select the system and click  button in the top right corner and specify the folder in which you want to save it.


## Biorhythms tab

If you have specified Date of birth (DOB) in the Cards details then you can see the Biorhythms tab. Biorhythms are based on DOB and can be calculated for any period in the past and for one year.

By clicking on the drop-down lists you can select the period for which you want to see the biorhythms. You can select up to 2 years upfront.

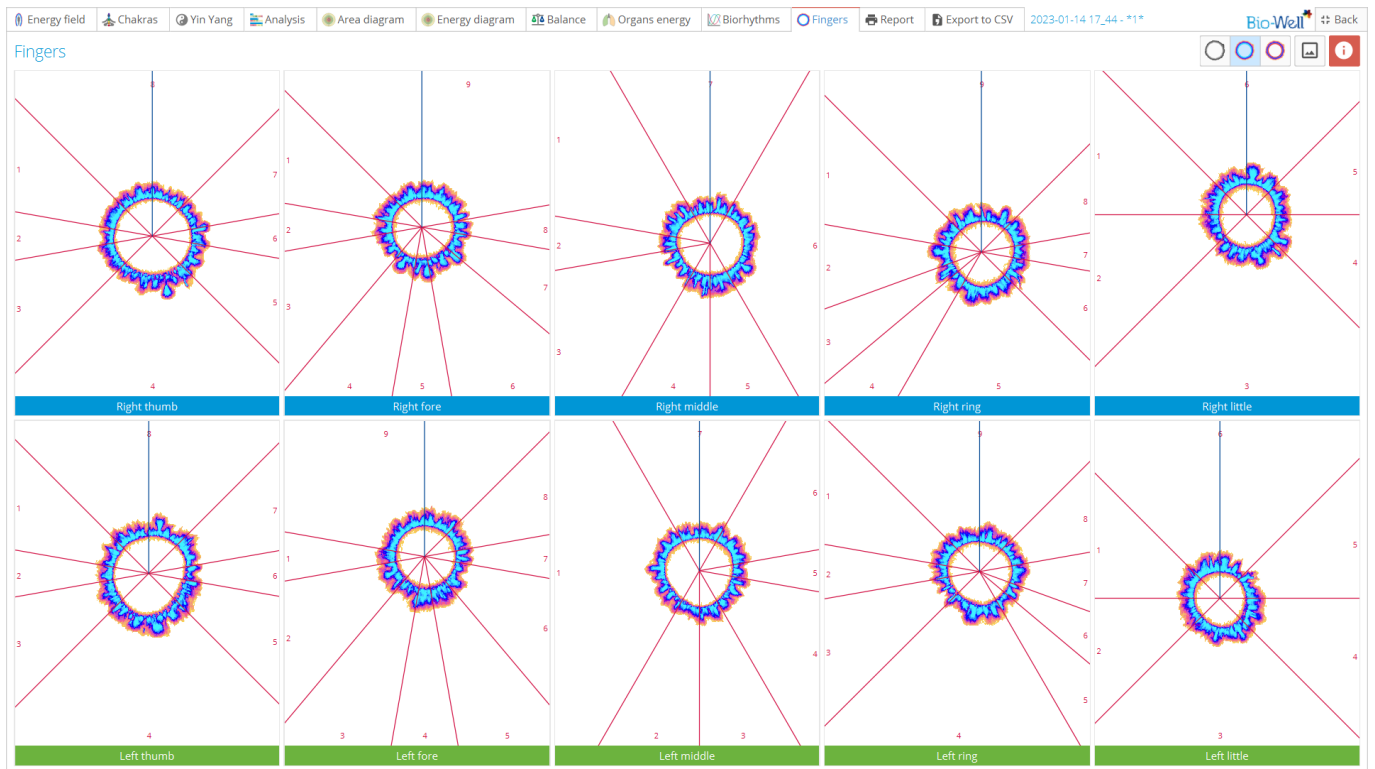


*Pic. 45. Biorhythms tab view.*

If you want to save any image from the Biorhythms tab – select the time period you like and click  button in the top right corner and specify the folder in which you want to save it.

## Fingers tab

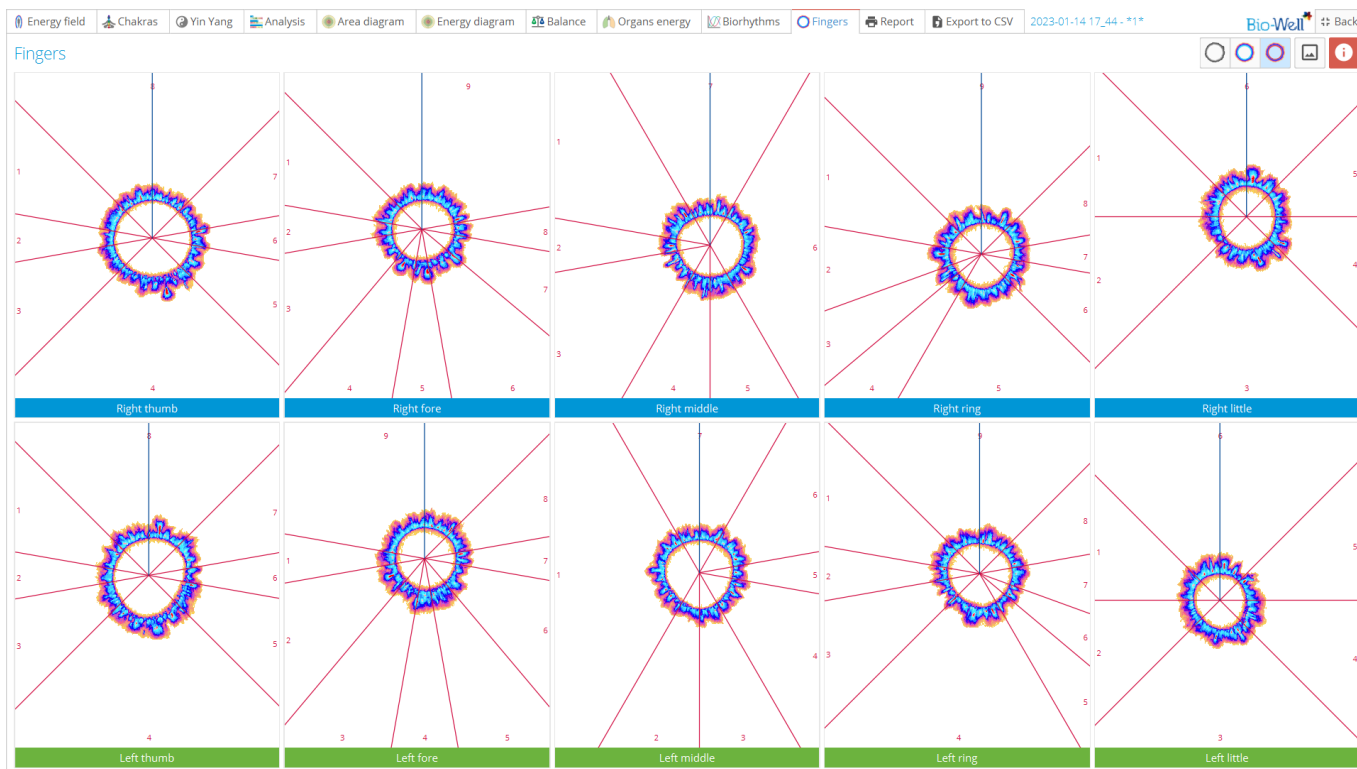
On the Fingers tab you can see captured images of the 10 fingers in the selected Scan. Here you can see actual intersection of GIs according to the meridian concept and more than 25 years of clinical studies and research. Clicking on any GI will open a separate window with a larger view of the GI and calculated parameters (pic. 48).



*Pic. 46. Fingers tab view with energy palette.*

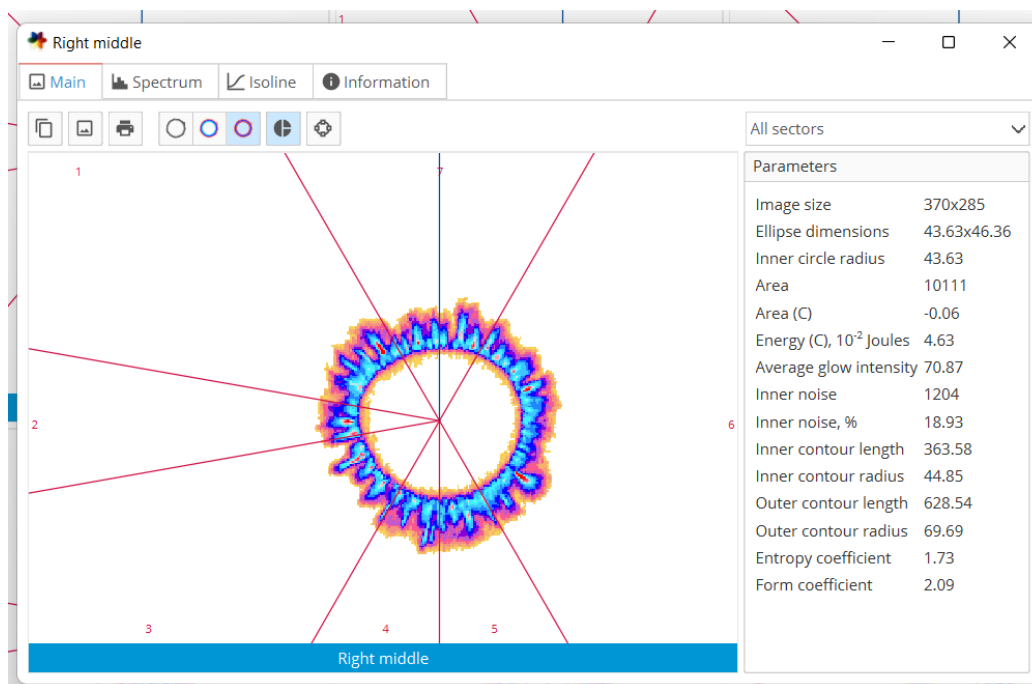


*Pic. 47. Fingers tab view with grey-scale palette – original image.*



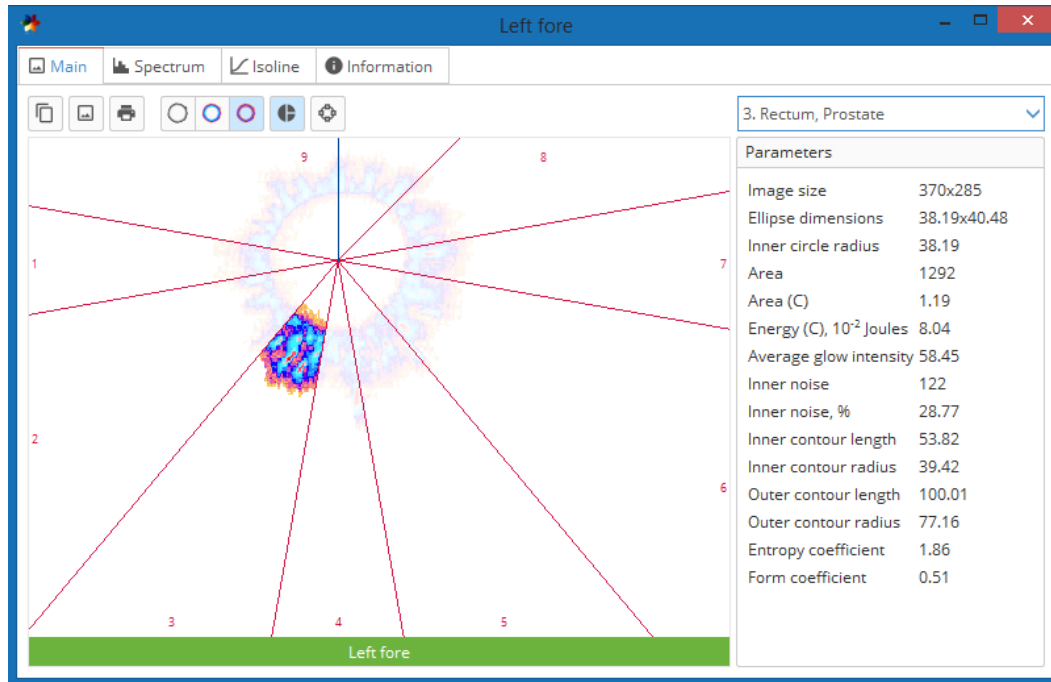
Pic. 48. Fingers tab view with contrast palette.

52



Pic. 49.1. Pop-up window with GI of a finger and its parameters









Click on “All sectors” field to see the full list of sectors and their consecutive number. You can select one of the sectors – then other sectors will be dimmed and on the right panel you will see parameters for the selected sector Glow.



Pic. 49.2. Selecting one sector from the list.

In the bar right above the Glow Image you can do:

53

-  - copy the image to the clipboard;
-  - save current image to a specified folder;
-  - print the current image;
-  - turn on/off the grey-scale coloring mode (original image);
-  - turn on/off the standard 10-grades coloring mode (selected by default);
-  - turn on/off the 14-grades coloring mode (contrast palette);
-  - turn on/off sectors intersection scheme;
-  - turn on/off inner and outer contour lines.

*Grey-scale is the original image that is used for calculation of all the parameters in the Bio-Well Software.*

On the right side you can see the list of all parameters calculated for each GI of finger and each sector.

Three parameters are related to the whole GI:

**Image size** – size of the whole image in pixels (always is equal to 370\*285 px).

**Ellipse dimensions** – X and Y dimensions of the inscribed ellipse in pixels.

**Inner circle radius** – radius of the inscribed circle in pixels.

Other parameters are calculated for the whole GI and for sectors individually.

**Area** – number of pixels of the Glow Image.

**Area (C)** - ratio between Area of the finger glow and the Area of glow of the calibration cylinder (for sector or whole image).

**Normalized Area** - the ratio of GI Area to the area of the inner oval.

**Intensity** – average intensity of all the pixels from the GI.

**Inner area** – overall number of pixels in the inner oval.

**Inner noise** – number of noise (colored) pixels in the inner oval.

**Inner noise (%)** - ratio of inner noise and inner area in percents.

**Energy** – energy of Glow in  $*10^{-2}$  Joules.

**Energy (C)** - energy corrected to sector's angular size.

54

**Form Coefficient (FC)** - is calculated according to the formula:  $FC = L^2/S$ , where L is the length of the GI external contour and S is the GI Area.

**Entropy Coefficient (EC)** - the ratio of outer contour to the inner contour lengths.

**Inner contour length** – length in pixels of the inner contour of the GI.

**Inner contour radius** - radius in pixels of the inner contour of the GI.

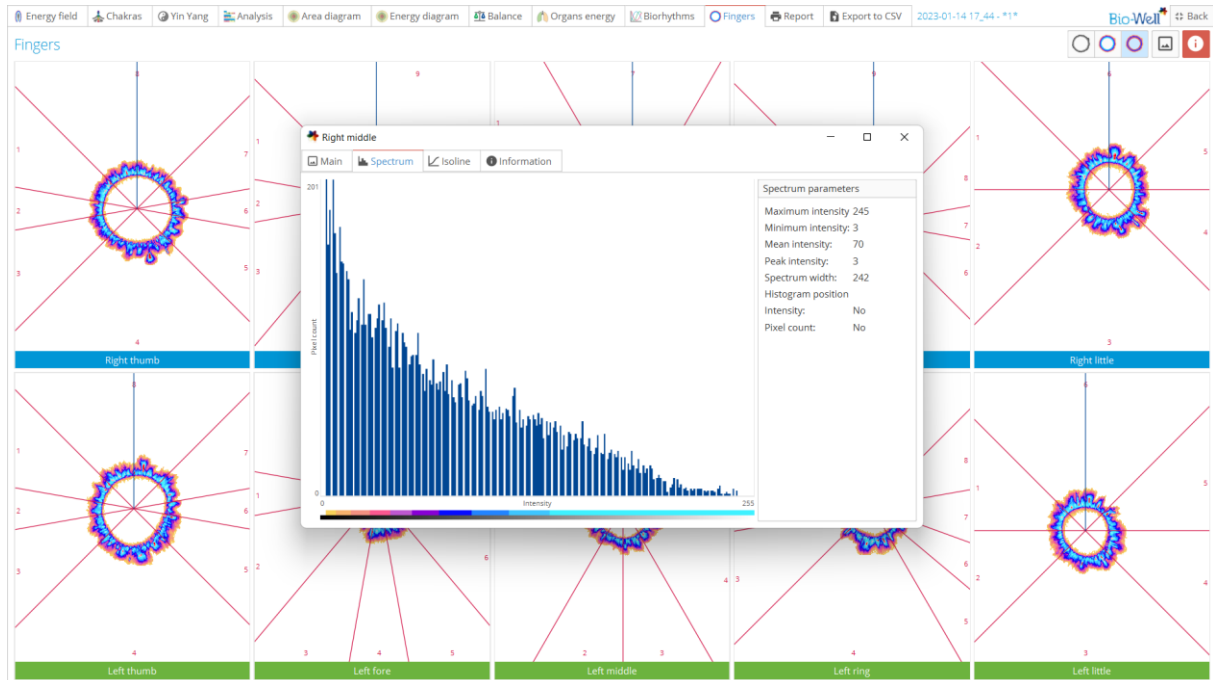
**Outer contour length** - length in pixels of the outer contour of the GI.

**Outer contour radius** - radius in pixels of the outer contour of the GI.

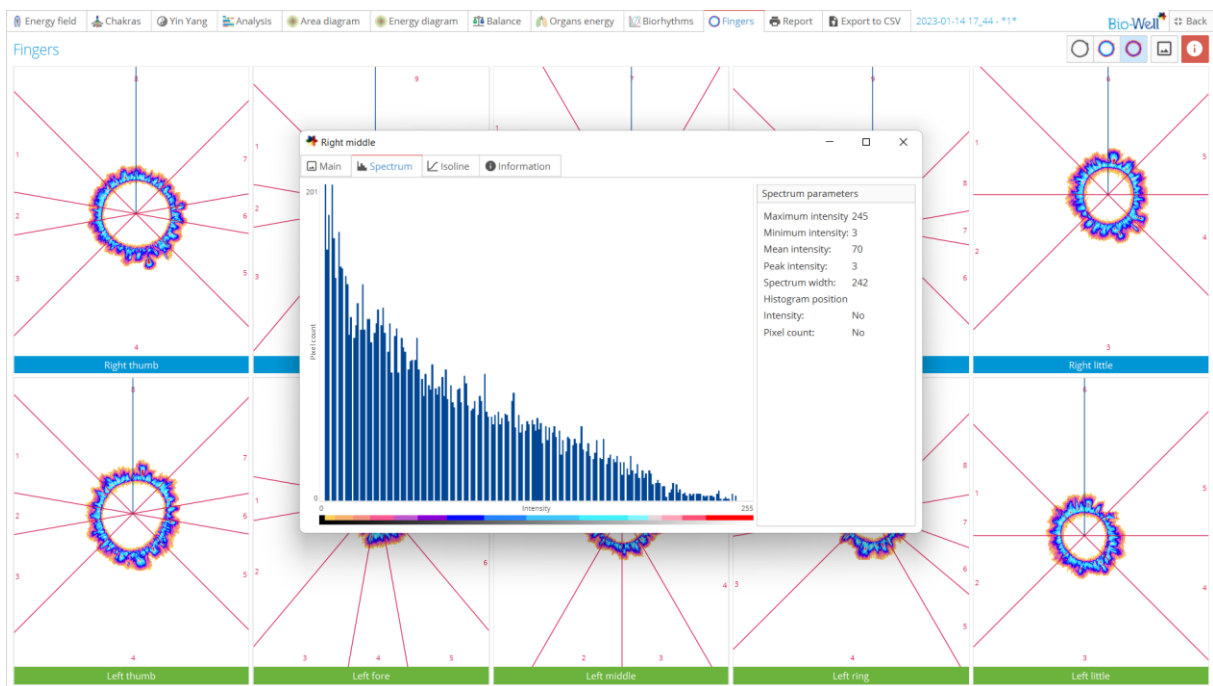
There is a possibility to see the technical data about the image: tabs “Spectrum” and “Isoline”.

Click on “Spectrum” to see the distribution of pixels of various intensity in the GI.

In case of the contrast palette (pic. 50), you can see that the most intensive part of the spectrum is colored in red hues. It makes it easier for you to find the most intensive clusters of glow on the images.



*Pic. 50. Spectrum of the Glow Image of one finger in energy palette.*



*Pic. 51. Spectrum of the Glow Image of one finger in contrast palette.*

Left part of the spectrum is cut as it is related to the background pixels of the CCD matrix of the Bio-Well GDV Camera device. These pixels are visible only on the images while you are scanning fingers and editing them (if "Auto-clean" feature is OFF). Once you click "Analyze" button all these pixels are deleted and only the pixels related to the Glow Image are left.



Pic. 52. Isoline of the Glow Image.

Isoline of the GI is not used for interpretation, it is more technical data.

Name	Area	Area (C)	Norm area	Intensity	Inner area	Inner noise	Inner noise (%)	Energy	Energy (C)	FC
Whole image	13396	0.81	2.52	81.18	5317.00	2814	52.92	6.41	6.41	2.77
1. Spine - cervical zone	1309	0.65	2.57	78.41	509	337	66.21	0.61	6.23	0.64
2. Spine - thorax zone	731	0.68	2.40	78.01	305	181	59.34	0.34	6.05	0.30
3. Spine - lumbar zone	1414	0.44	2.50	84.17	566	283	50.00	0.70	6.32	0.82
4. Sacrum, Prostate	1283	1.13	3.34	88.81	384	202	52.60	0.67	8.06	0.58
5. Coccyx, Pelvis minor zone, Prostate	954	2.05	4.01	87.93	238	128	53.78	0.49	8.90	0.43
6. Blind gut	1673	1.02	3.03	83.02	553	265	47.92	0.82	7.37	0.78
7. Appendix	1075	0.58	2.23	82.00	483	193	39.96	0.52	6.24	0.66
8. Ascending colon	719	0.41	2.33	79.02	309	132	42.72	0.34	6.03	0.33
9. Transverse colon	4236	0.33	2.30	77.19	1844	1093	59.27	1.93	5.55	2.18

Pic. 53. Parameters of the whole GI and its sectors.

Here you can see all the values of calculated parameters in one table that you can export for further analysis by clicking "Export to CSV" button in the bottom left corner.

In order to see brief description of the parameters click “Description” button in the bottom right corner (pic. 54).

**Area** - Amount of light quanta generated by the subject in computer units - pixels. **Area (C)** - ratio of Area or BIO-gram glow to the Area of glow of calibration cylinder (for sector or whole image). **Normalized area** - the ratio of BIO-gram area to the area of the inner oval. **Intensity** - Averaged Energy of light emission in computer units. **Inner noise** - Amount of light in the inner contour of the BIO-gram – characteristic of the organism activity. **Energy** - Energy of light in  $10^{-2}$  Joules. **Energy (C)** - energy corrected to sectors angular size. **EC (Entropy coefficient)** - the ratio of BIO-gram external contour to the internal contour. **FC (Form Coefficient)** - is calculated according to the formula:  $FC = aL^2/S$ , where L is the length of the BIO-gram external contour and S is the BIO-gram area.

**Norms of the calculated parameters for sector or whole image.**

Value	Area (C)	Energy (C)
Very low	-3 ÷ -2	0 ÷ 2
Low	-2 ÷ -1	2 ÷ 4
Optimal	-1 ÷ 1	4 ÷ 6
Hightened	1 ÷ 2	6 ÷ 8
High	2 ÷ 3	8 ÷ 10

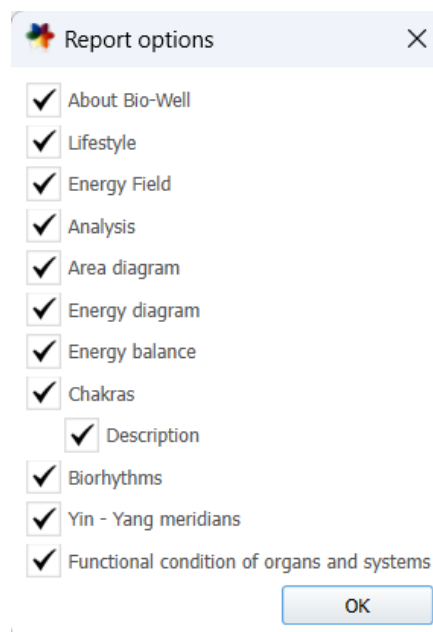
Pic. 54. Description of parameters with norms.

Only those parameters that have norms are colored in the table according to the standard coloring grid (pic. 53).

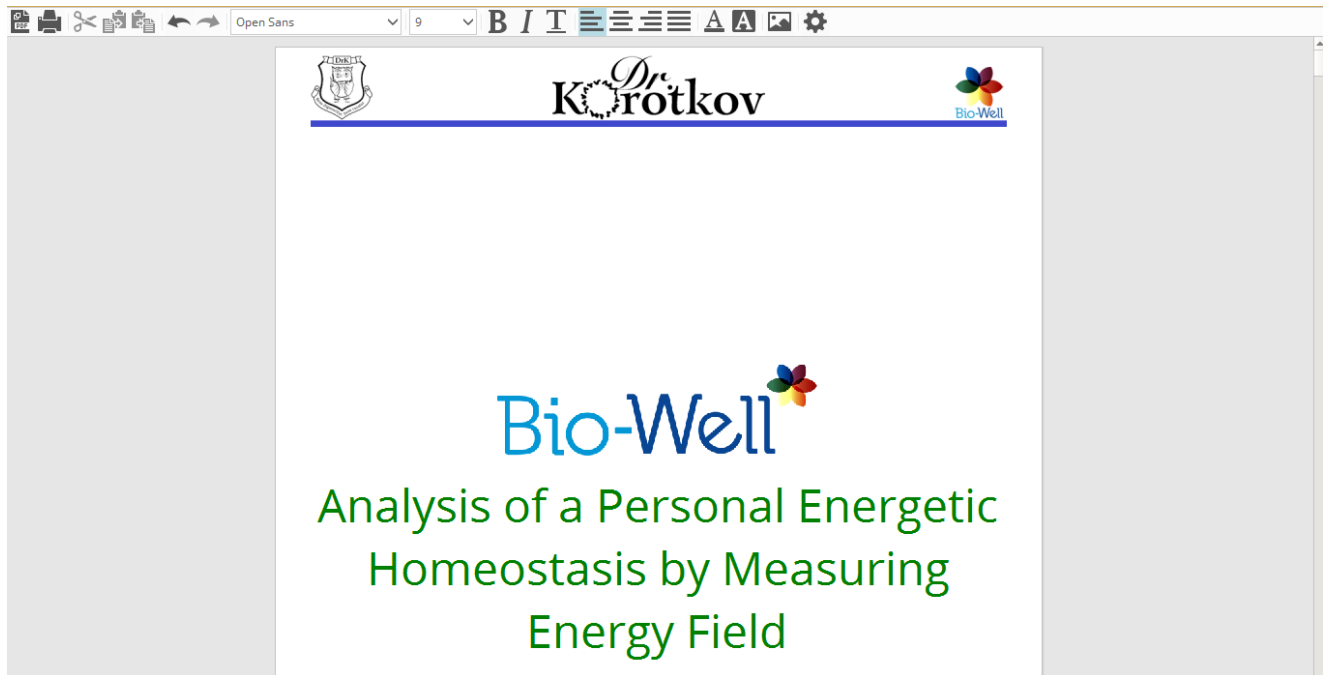
### Report tab

57


Click on this tab to create an automatic report containing: descriptions of the main parameters, pictures, graphs and diagrams from almost all tabs. It is opened in a separate window. You can select the modules that you want to be included in the report by marking them (pic. 55).



Pic. 55. Window for selecting the modules in the report.




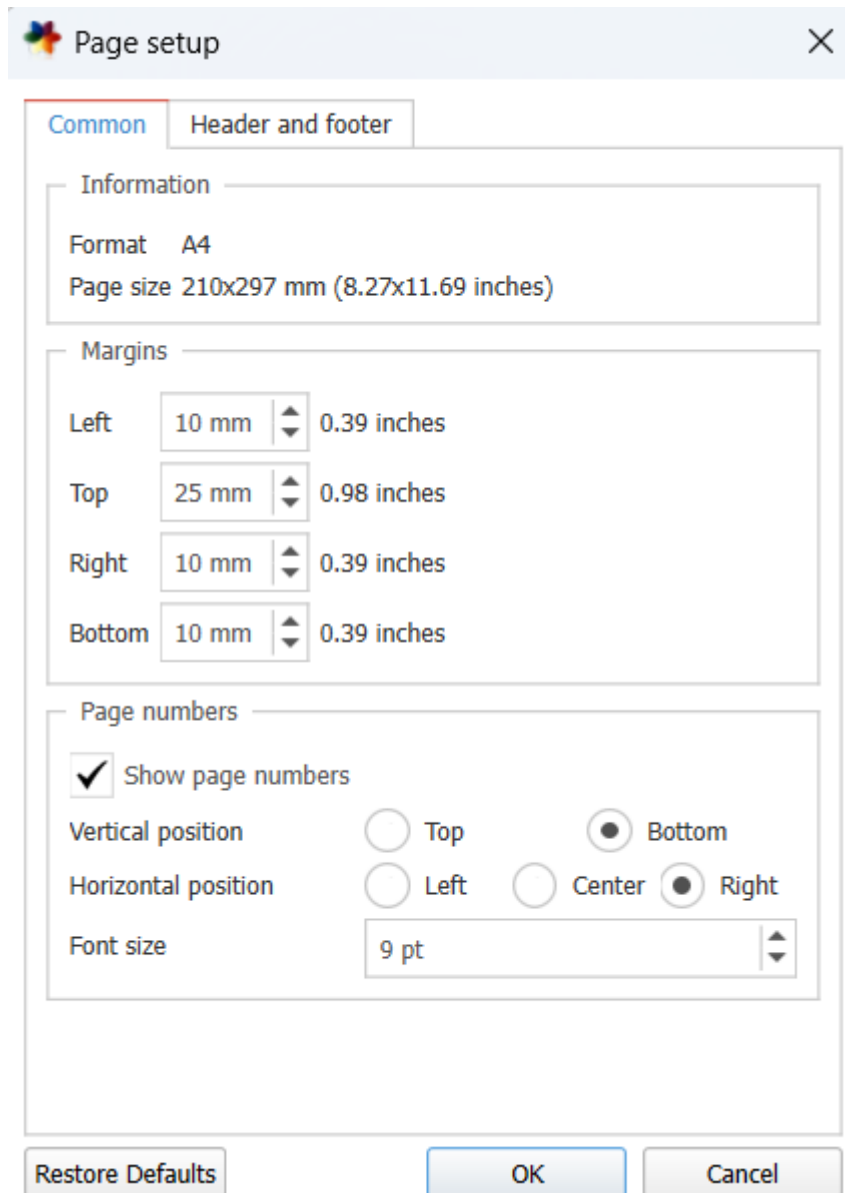
*Pic. 56. Automatic report template.*

The automatic report (pic. 56) is editable: you can add or delete whatever you like. Comments, recommendations and pictures may be added, and all included information is customizable for corrections and omissions. You can apply standard text editing tools there. You can save this file in a PDF format by clicking  button or you can print it by clicking the printer button.

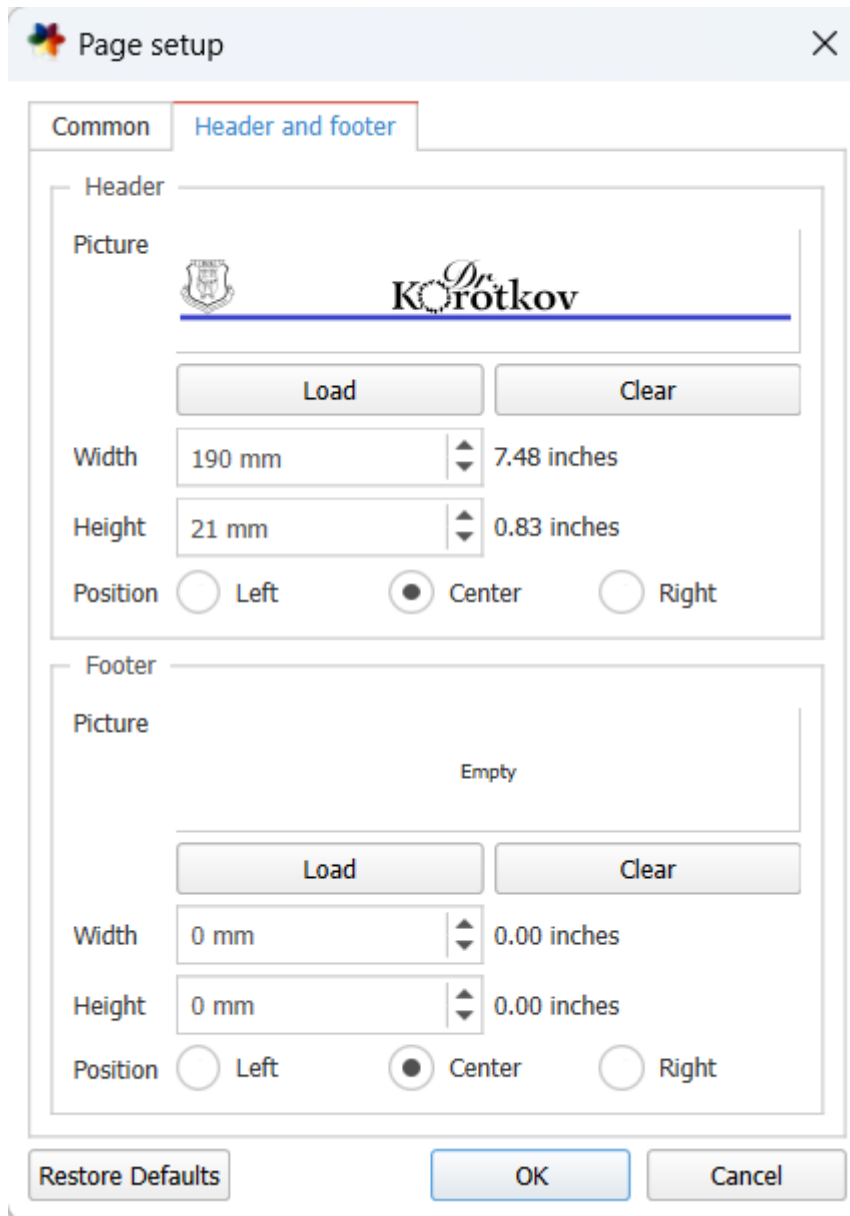
58

Report file is automatically divided into pages.

It is possible to customize header and footer of the automatic report, and add page numbers. Click on the  button to enter page setup menu (pic. 57-58).



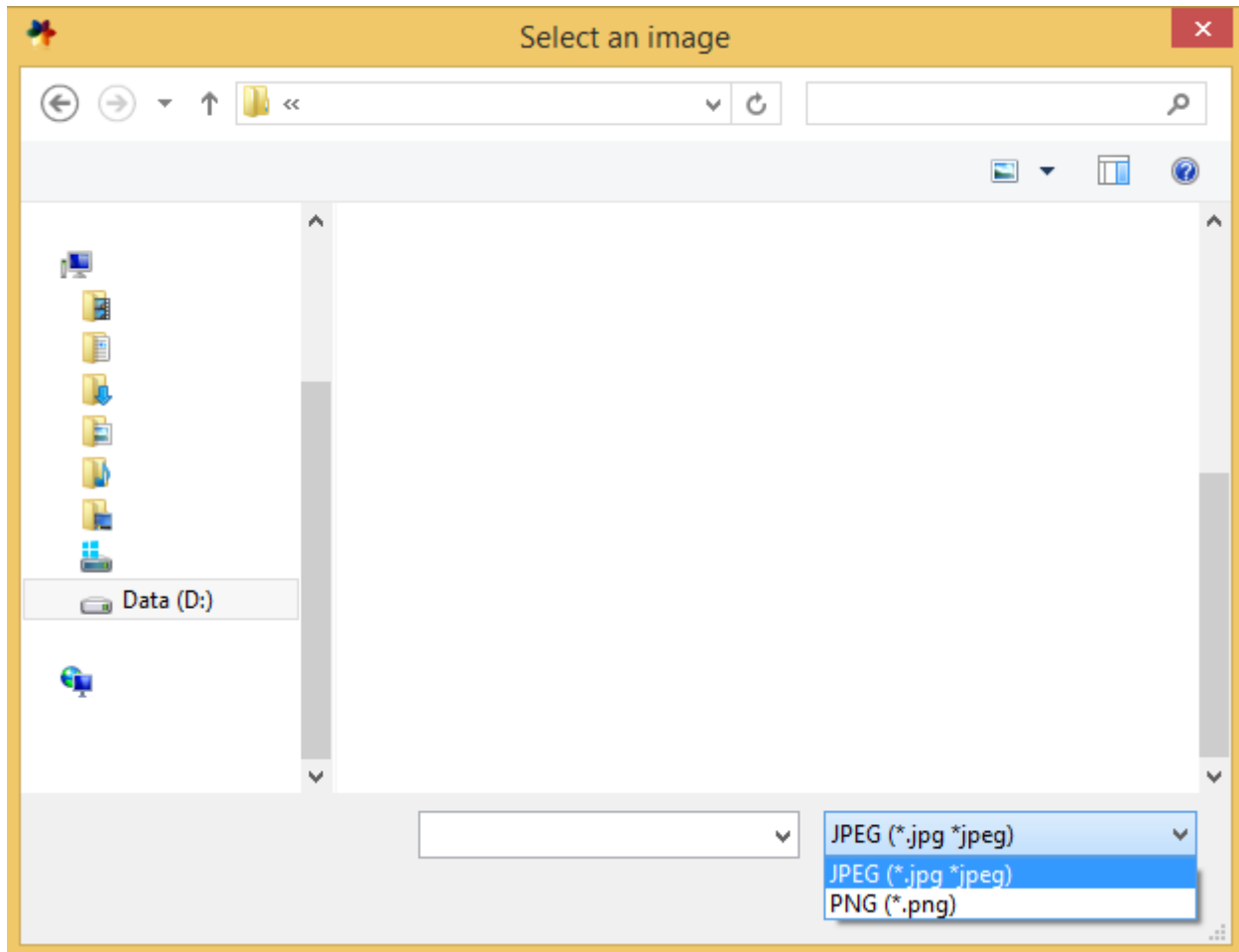
*Pic. 57. Common settings of the page setup.*



*Pic. 58. Header and footer settings of the page setup.*

You can add your company's logo as a header and company's contact details as a footer. Both header and footer should be loaded in either JPG or PNG file format (pic. 59). Click "Load" button to select the file.

You can always restore the default settings and parameters by clicking "Restore Defaults" button.



*Pic. 59. Selecting the JPG or PNG file for header or footer in the page setup.*

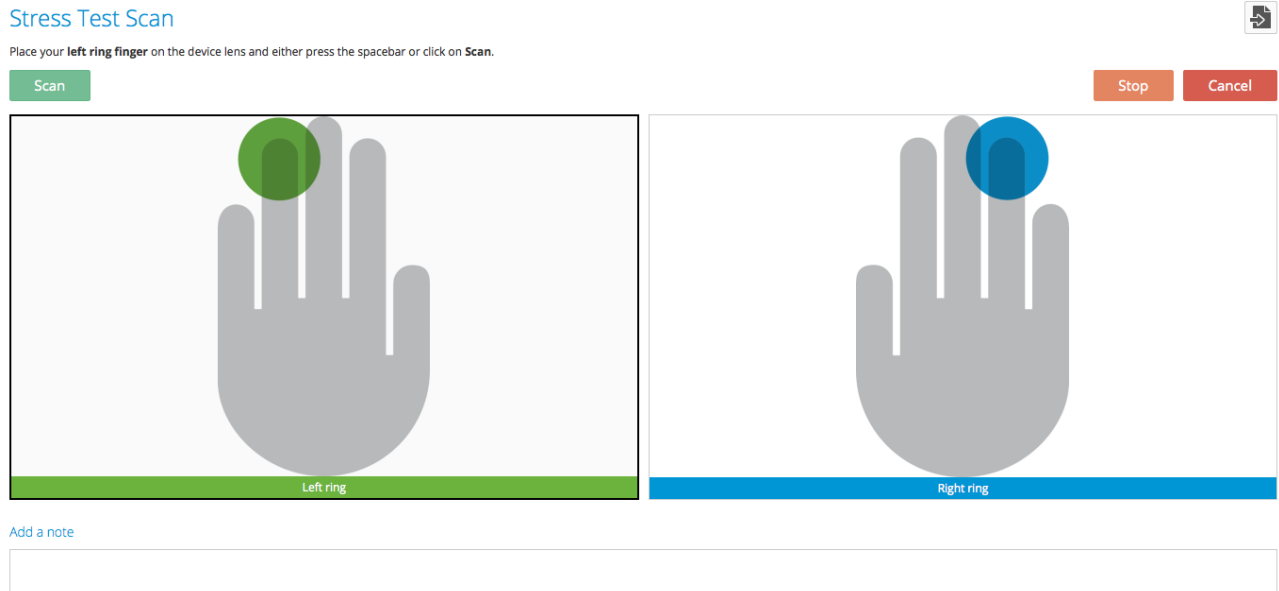
If you add your company's header and footer once – they will be applied to all further automatic reports that you will create in this Bio-Well Account.

### **Export to CSV tab**

Saves all the parameters (you can select needed in the pop-up menu) in CSV format for further processing in Microsoft Excel, LibreOffice Calc, Algorithm and other similar programs. Fractional numbers are presented using the European style – with a comma separating the integer and decimal parts of the number. It may be necessary to enable European settings within the program to view the data correctly.

## Conducting a “Stress Test” Scan

Select a Card in which you want to make a “Stress Test” Scan and click “Stress Test” button in the right top corner of the main screen to create a new Scan. Special interface will be displayed (pic. 60).



*Pic. 60. Interface for conducting a “Stress Test” Scan.*

62


If your Bio-Well GDV Camera device is already connected to your computer – then you can conduct a Scan. You can cancel the scanning process at any moment by clicking “Cancel” button, and you will be returned to the main screen.

Typically, the Ring fingers (4L and 4R) are used for this scan. However, the use of other fingers is possible.

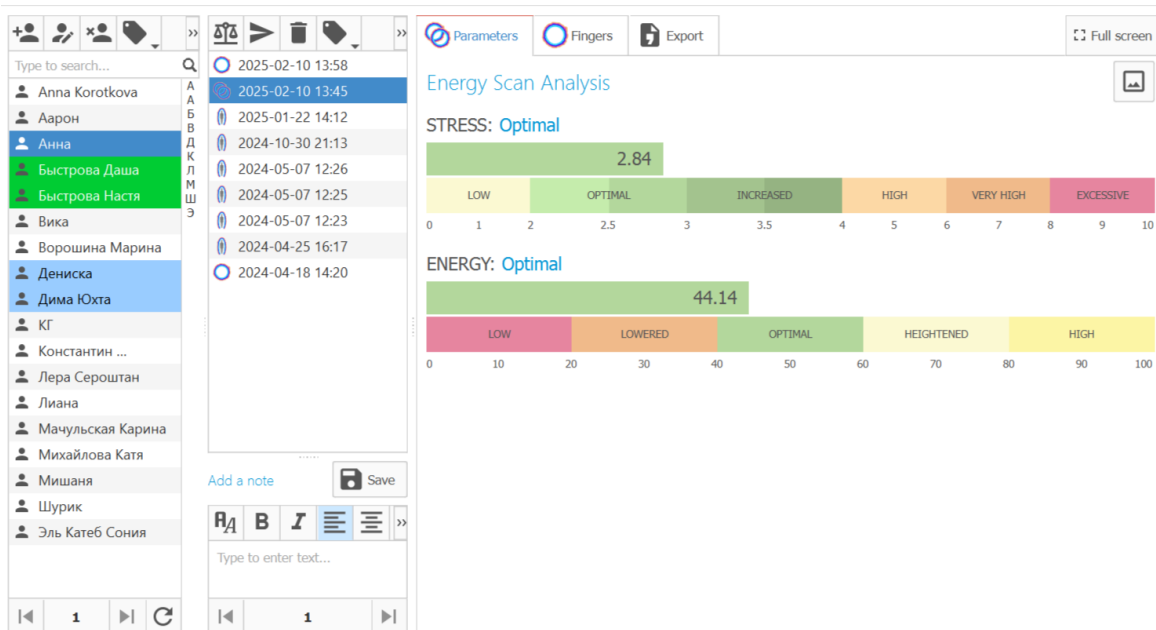
Once you have done scans of both fingers and you are satisfied with the quality of the obtained images – click “Analyze” button in the top right corner of the screen.

GI will be sent to the Bio-Well Server for processing and within several seconds (depends on the speed of the Internet connection) result will be displayed (pic.60). During the processing of the Scans and downloading the result from the server to your computer you will see the percentage of the process completion on the screen. Also in the line of the Scan name you will see the same percentage representing the fulfillment of the downloading process.

## “Stress Test” Scan results

Select any “Stress Test” Scan (marked with  sign) from your database. Results of the Scans that you select in the Scans list are automatically downloaded from the Bio-Well Server. When you select multiple Scans at a time by using CTRL or SHIFT buttons on your keyboard – results of all the selected Scans are going to be downloaded one-by-one.

Result of the “Stress test” Scan is represented by integral parameters – Stress and Energy– in numeric form (pic. 61).




Pic. 61. Result of the “Stress test” Scan.

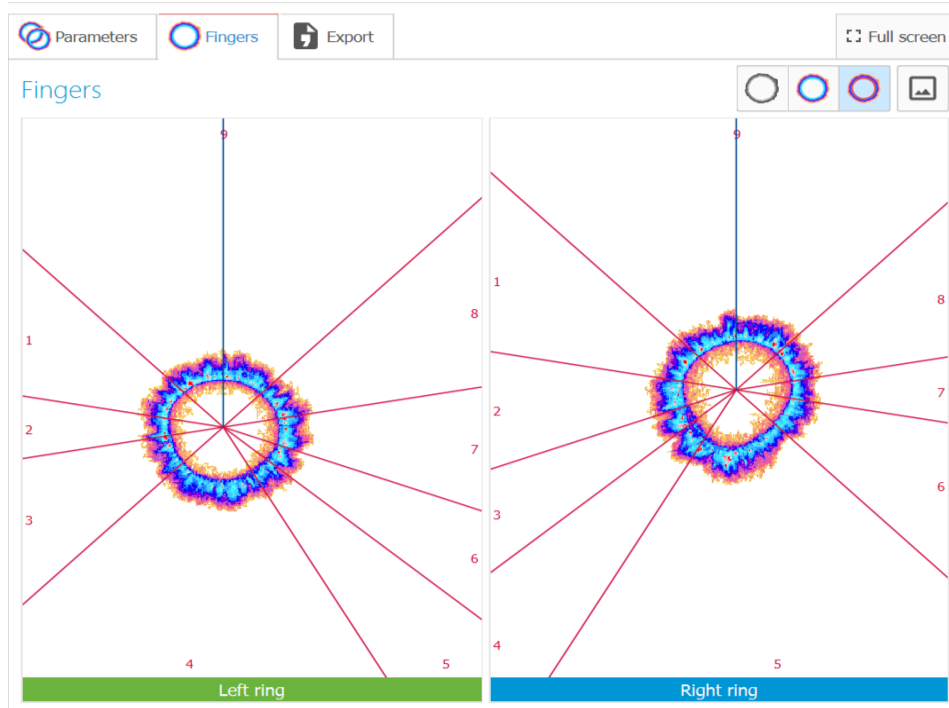
All parameters have some optimal values as well as lowered and heightened values (based on statistics collected).

For easier interpretation of these parameters – colored bars are used.

In order to enlarge the graphs – click “Full screen” button in the top right corner – then database part (with three columns) will not be displayed. “Back” button takes you back to initial view.

If you want to save the image with these bars – click  button in the top right corner and specify the folder in which you want to save it.

Click the “Fingers” tab in order to see images of the scanned fingers (pic. 62).

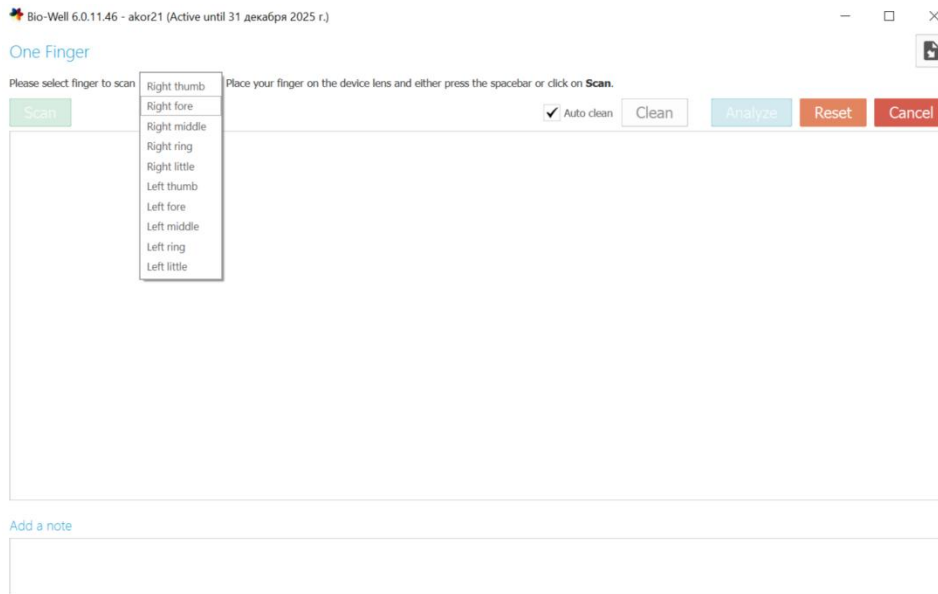


*Pic. 62. Scanned fingers tab for a “Stress test” result.*

Also there is a possibility to save the values of these parameters in CSV format for further processing in Microsoft Excel, Libre Office Calc, Algorithm and other similar programs – just click “Export to CSV” button, specify a name of the file and a folder in which you want to save it. Fractional numbers are presented using the European style – with a comma separating the integer and decimal portions of the number. It may be necessary to enable European settings within the program to view the data correctly.

## Conducting a “One Finger” Scan

Select a Card in which you want to make a “One Finger” Scan and click “One Finger” button in the right top corner of the main screen to create a new Scan. Special interface will be displayed (pic. 63). In this mode you can capture one selected finger several times.



*Pic. 63. “One Finger” Scan mode interface.*


Before or during capturing please select from the drop-down list in the top left corner the name of the finger that is going to be captured. It is important, as sector intersection is different for different fingers.

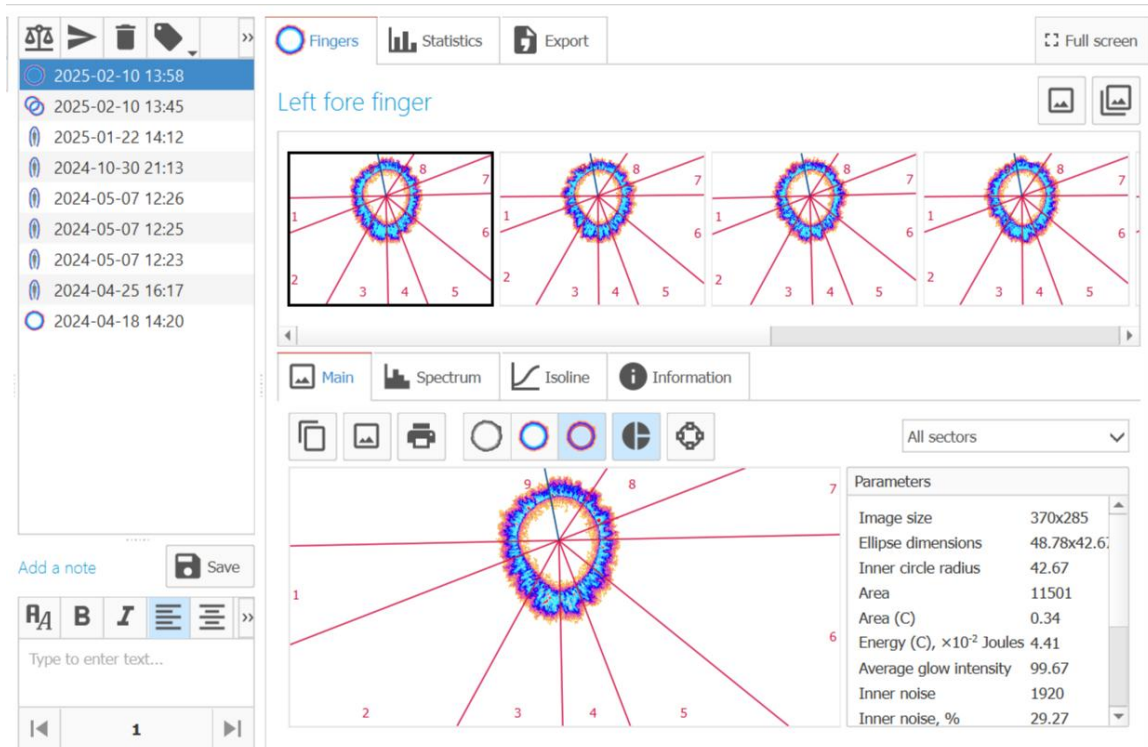
Capturing process is similar to the “Full Scan” and “Stress Test” modes. After each capture person should take out finger and then put it back again for the next scan.

You have to capture at least 4 times same finger to be able to analyze the data. Maximum is 100. If you don’t like any of the images click the black cross at the top of the image to delete it.

Click “Analyze” button once you are satisfied with the quality of all captured images.

## “One Finger” Scan results

Select “One Finger” Scan (marked with  sign) from your database (pic. 64).





Pic. 64. “One Finger” Scan results interface.

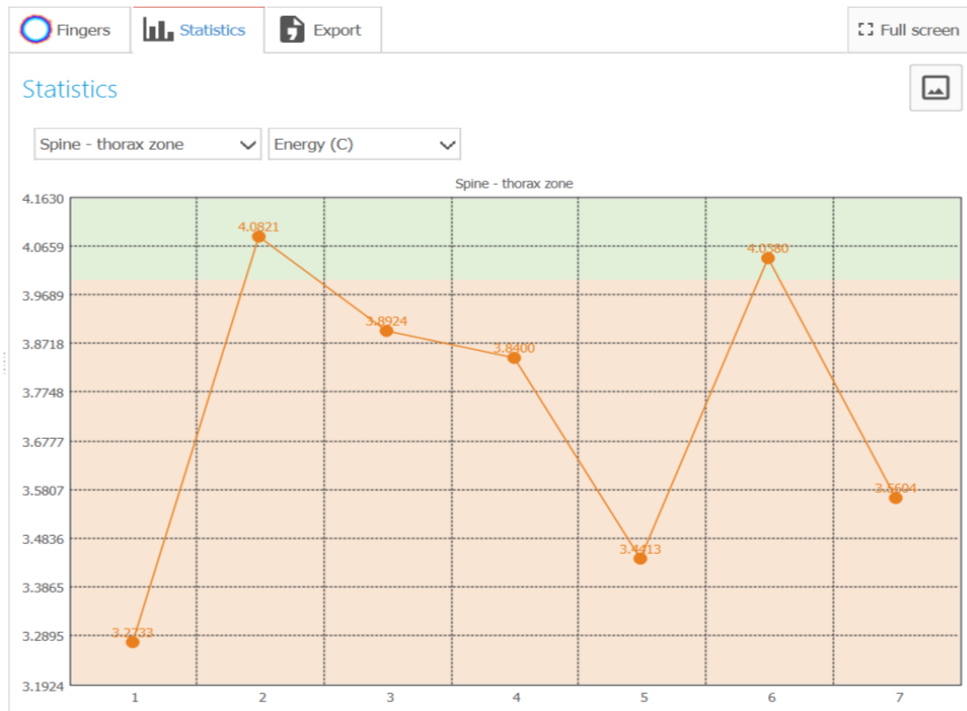
Lower part of the interface is equal to the one of a separate finger from a “Full Scan”. All the features are the same.

At the upper part you can click on a specific GI that you want to look at. Use the scroll bar to access all images if you have more than 4 images in your set.

This mode is specially made for statistical analysis of some finger or specific sector in dynamics. To access statistics click “Statistics” tab at the top of the “One Finger” interface (pic. 65). For those parameters that have norms (Area(C) and Energy(C)) the background of the graph will be colored according to the standard coloring grid.

If you want to save all images – click  button in the top right corner and specify the folder in which you want to save it.

It is also possible to save images and one of the graphs in one move – click the  button and specify the folder in which you want to save them.




*Pic. 65. Statistics interface of the "One Finger" Scan.*

Here you can select "Whole image" or specific sector from a drop-down list for which you want to see the graph, and select any of the calculated parameters from the drop-down list.

67

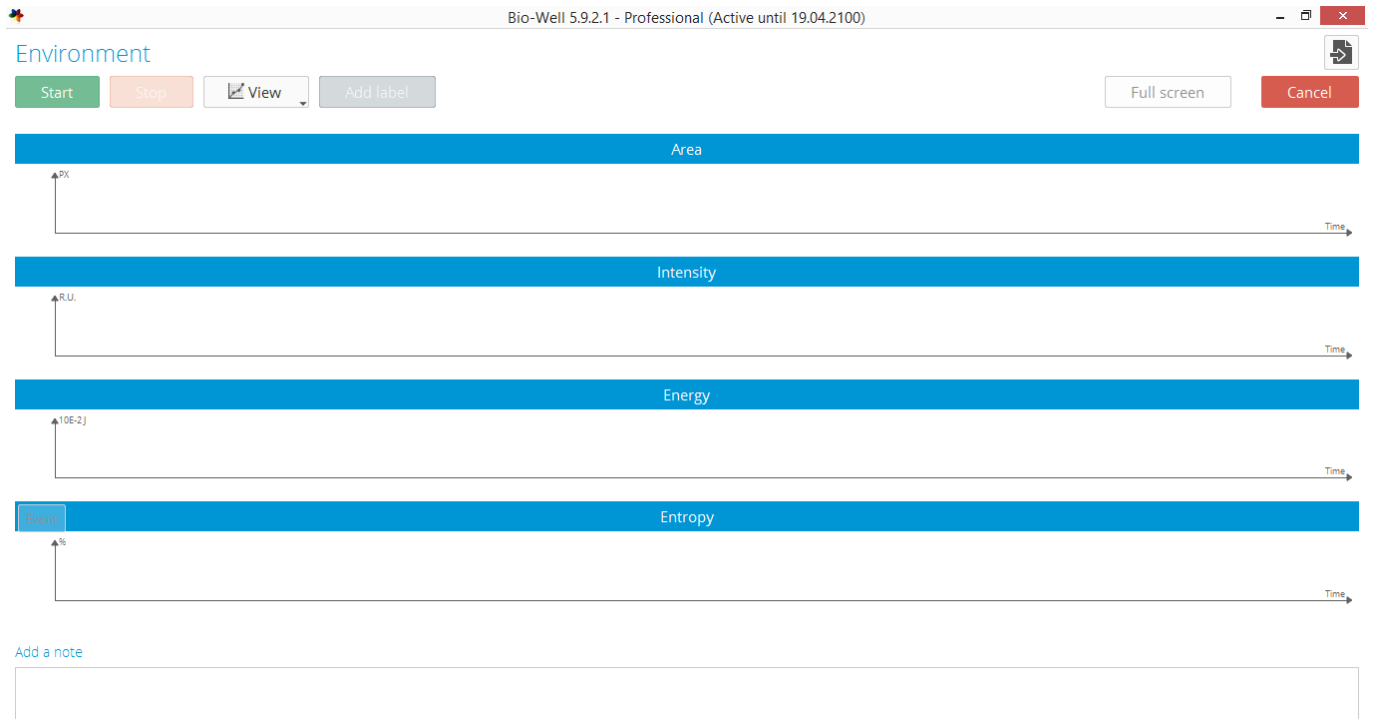
There is a possibility to save the values of all parameters from all the images in CSV format for further processing in Microsoft Excel, LibreOffice Calc, Algorithm and other similar programs – just click "Export to CSV" button, specify a name of the file and a folder in which you want to save it.

If you want to save any graph – click  button in the top right corner and specify the folder in which you want to save it.

## Conducting an “Environment” Scan

### (Bio-Well Glove, Sputnik Sensor or Water Sensor required)

Select a Card in which you want to make an “Environment” Scan and click “Environment” button in the right top corner of the main screen to create a new Scan. Special interface will be displayed (pic. 66A).



68

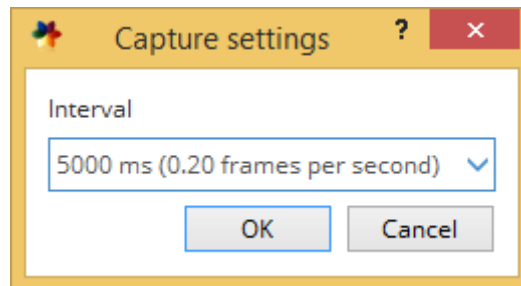
*Pic. 66A. Interface for conducting an “Environment” Scan.*

Place metal cylinder insert on the Bio-Well glass electrode and connect an external electrode wire with “banana” jack to it. Bio-Well Company produces three types of external electrode: Bio-Well Glove, Sputnik Sensor and Water Sensor. For more detailed information about working with these accessories visit the page <https://bio-well.com/pages/manuals>.

This mode enables the measurement of dynamic processes (long-term). During the first three minutes (time digits will be of red color), a baseline signal is recorded - this data is excluded from analysis.

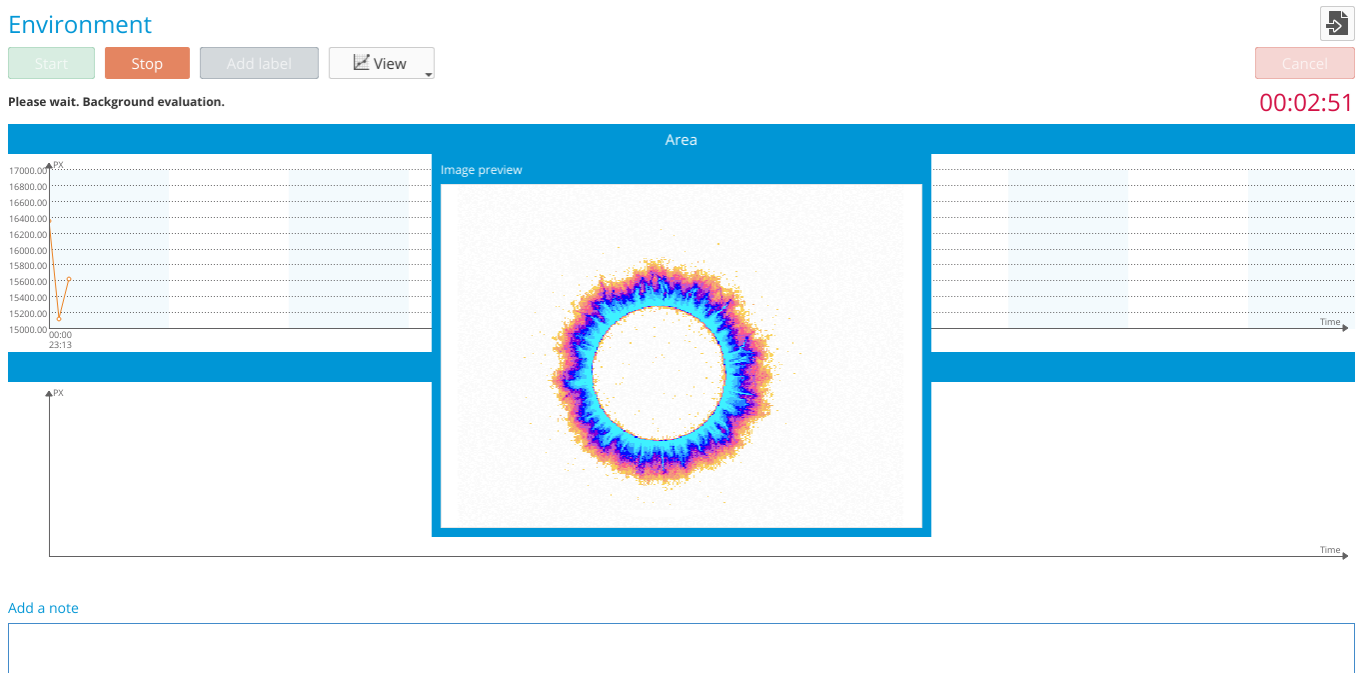
It is recommended that during the readings no other activity would be done at the computer and computer would not switch to sleep mode till the completion of the session.

Click “Settings” button in order to select the time interval between the captures (pic. 66B). Options are: from 5 to 60 seconds for BW 1.0 and from 1 to 60 seconds for BW 2.0. Click on the drop-down list, select the preferred interval and click “OK”. For long-term experiments you can select bigger time intervals.



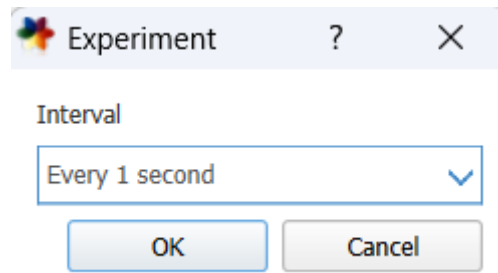
Pic. 66B. “Settings” pop-up window in “Environment” Scan.

Click “Cancel” button to return to the Main screen. Click “Start” button to begin experiment. Test image of the metal cylinder will be shown. It should look like a circle with very little or no pixel noise inside (pic. 67). Only first 10 images will be displayed for you to check if position of cylinder is correct.



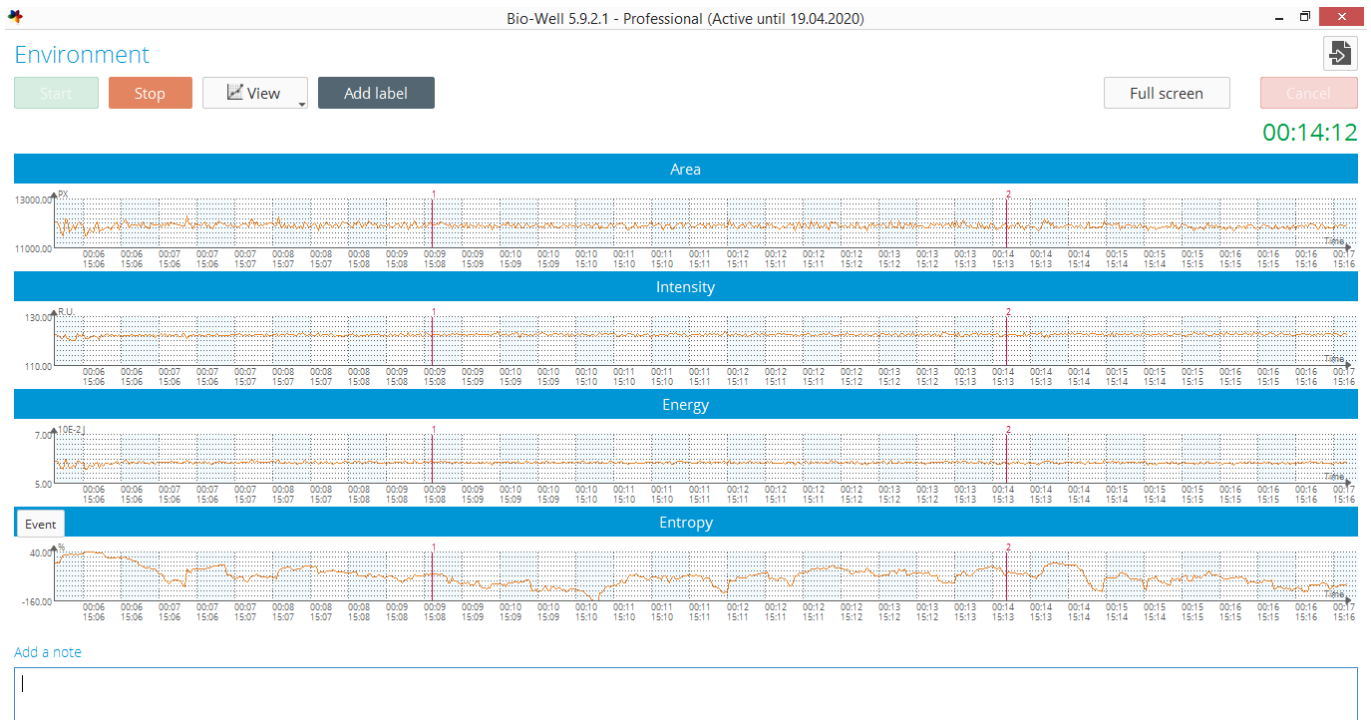
Pic. 67. Correct GI of the metal cylinder.

Once warming up time is finished (3 minutes, which will be automatically deleted once experiment is over) the timer will be reset and start from 00:00 again, and you will be able to add labels by clicking “Add Label” button. Labels may be added during readings. Just assign a name to every Label that you add and click “OK”.



Pic. 68. Adding labels to the experiment.

Click “View” button to change the graphs displayed on the screen. Options are: Area, Intensity, Energy and Entropy (Entropy graph will appear after 140 GI). You can select all of them or only those needed:



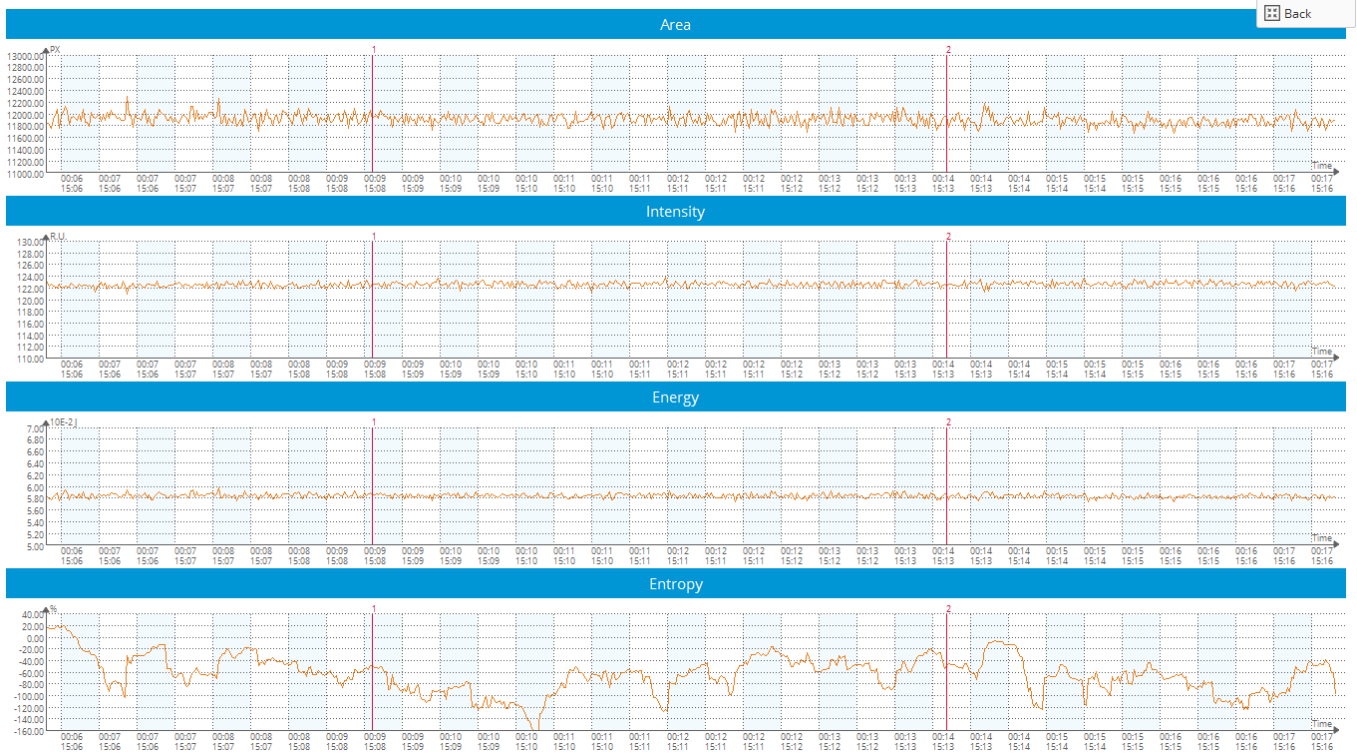
70

Pic. 69. Four graphs displayed during “Environment” Scan with labels “1” and “2” added.

In such a case resolution will be low and you will not be able to really analyze any of them by your eyes. We recommend to select 1 or 2 graphs to be displayed during the experiment. It will not affect the final result – anyway all 5 parameters will be calculated for the whole experiment.

Added labels will be displayed on the graphs as red lines.

You can switch the “Full screen” mode by clicking such button at the top right corner of the screen (pic. 70).



Pic. 70. Full screen mode.

X axis represents time. Each dot on the graphs represents one Glow Image taken.

Y axis represents the value of the selected parameter on the graph. You can manually change the scale of the Y axis by clicking with left mouse button on the Y axis and specifying the range that you are interested in, and clicking “OK” (see pic.71).

71

Y Axis
✕

Manual scale

Minimum

Maximum

Pic. 71. Setting up manually scale of the Y axis on the graph.

In the bottom of the screen you can see the “Add a note” field, where you can add any notes about this experiment.

In order to minimize the interference with the experiment you should not add labels during the experiment. There is a possibility to add labels on the timeline (X-Axis) after the experiment is finished and saved.

Clicking “Stop” button and clicking “Yes” in the pop-up window will save the data on the computer if Offline, or on the server if Online. In Online mode Scan will be


automatically processed on the Bio-Well Server and downloaded to your computer – you will see the result on your screen.

Once downloaded the result of the “Environment” Scan will be available for editing and statistical analysis.


## “Environment” Scan results

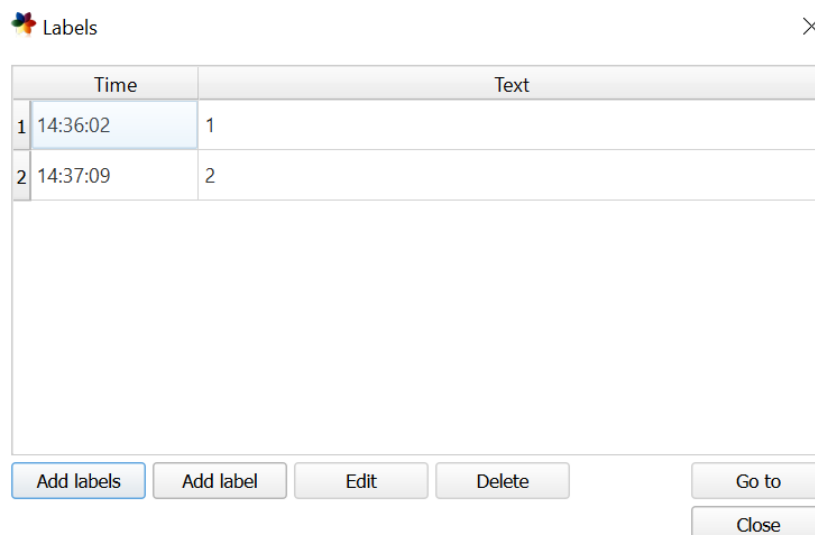
Select any “Environment” Scan (marked with  sign) from your database.

Top bar will give you several instruments to apply:

 Save as picture - save the graphs as an image on your computer (specify the destination folder and name).

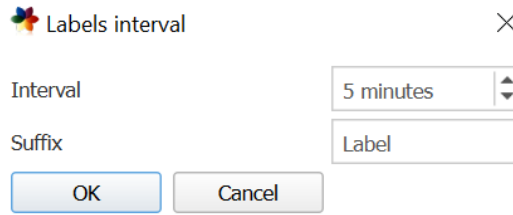
 - saves the graphs in BDF file format on your computer.

 - click to edit labels in this experiment (pic. 72).



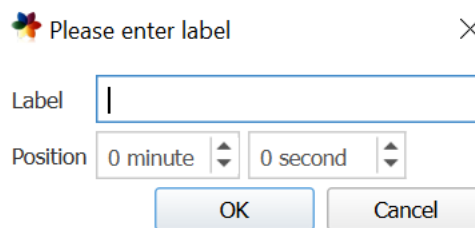
*Pic. 72. Editing labels list of the “Environment” experiment.*

Here you can add, edit names and delete labels from the list. “Go to” button will show on the screen the part of the graph with the selected label. Adding labels can be done automatically and manually.



*Pic. 73. Automatic adding of the labels.*

You can specify interval (from 1 minute till 999 minutes) and suffix of the labels and click “OK” to automatically add them. In the example above program will add labels every 5 minutes with names “Label1”, “Label2”, “Label3”, etc. Also you can add labels one by one manually: click “Add label” button, input the name of the label and specify exact time from the start of the experiment (pic. 74).



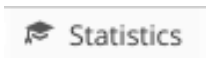
*Pic. 74. Manually adding labels to the experiment.*



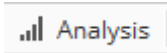
- click to cut one image (dot on the graph) or series of images from the experiment. Click with the right mouse button on any dot to select it (it will be marked with the green vertical line) or click and hold the right mouse button and then move the mouse cursor to select a range of images (dots) that you want to cut from the graph (the diapason will be colored in green).



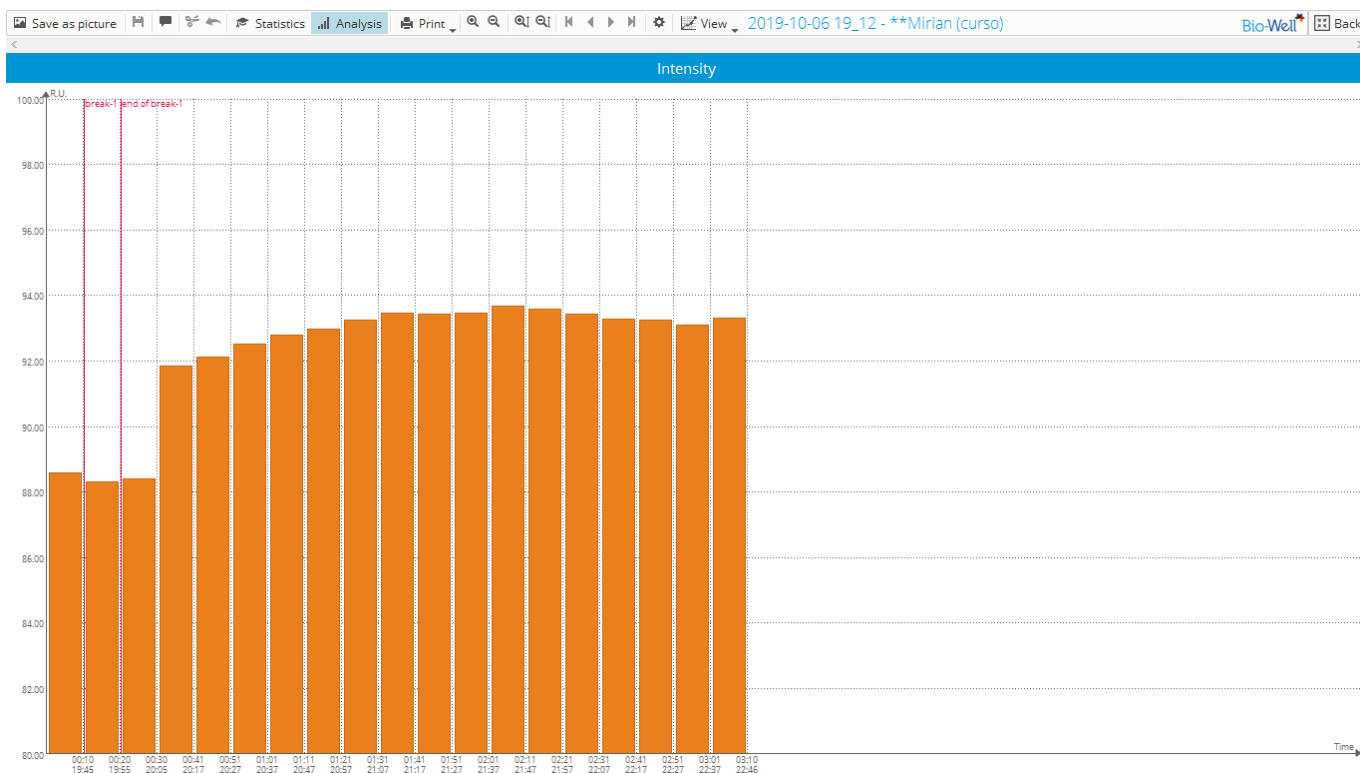
- click this button to undo last change that you have made.




- click this button once you are ready with all the rest of the features and ready to calculate the statistics – a new window will be opened.



- click to view expressprocessing of the results (bar-view). Graphs will be cut into 300 GI intervals: each bar is equal to the average value of the given parameter of 300 GI.Length in time of each bar will depend on the frequency of capturing images. If you capture 1 image every second then each bar will be equal to 5 minutes interval.



Pic. 75. "Analysis" view of the results. Each bar = 300 images.

 Cloud - opens the cloud window (fig.76).

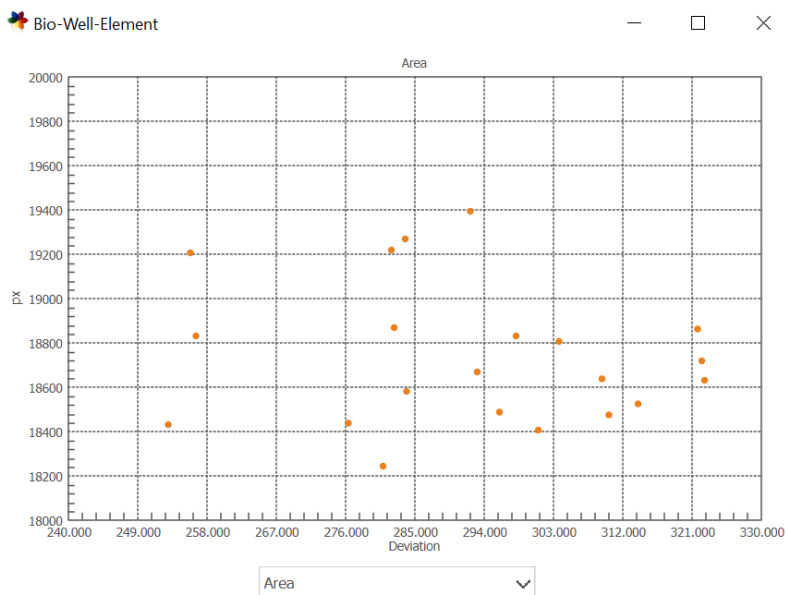


Fig.76. The "Cloud" window

 Print - click to open a drop-down list:

- Print all: send to printer all the available graphs (4).
- Print selected: send to printer only selected graphs that you see on the screen.
- Save as CSV: save all the experiment with all 4 parameters calculated to a CSV file format.



- click these buttons to maximize or minimize the scale of the X axis.



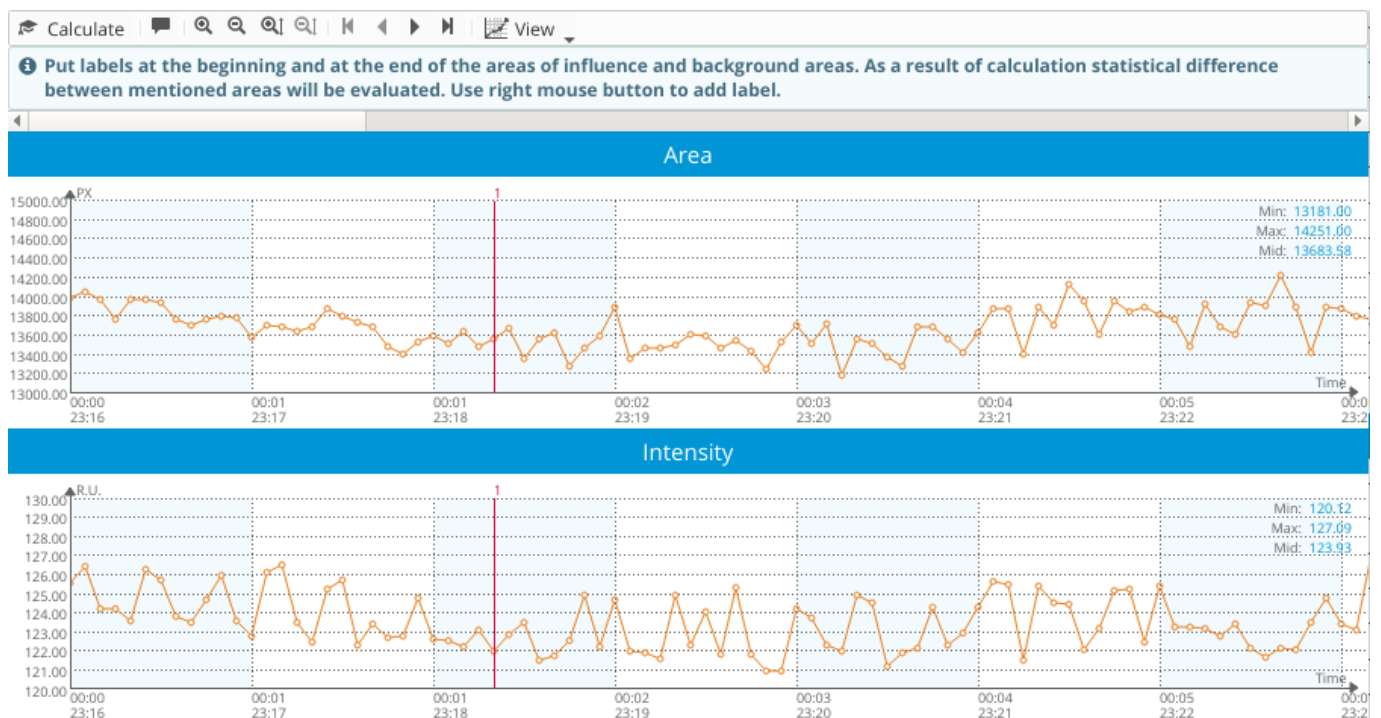
- click these buttons to maximize or minimize the scale of the Y axis.



- click these buttons to navigate through the graph. You can also use horizontal scroll bar on the top of the graphs to navigate through experiment.

Change any of the available parameters and click “OK” to apply them.

As soon as you have made all the preparations to statistical analysis – click “Statistics” button – a new window will be opened (pic. 77).



*Pic. 77. Statistics window for the “Environment” Scan.*

Top bar instruments panel is almost the same as on the initial screen with the “Environment” Scan results.

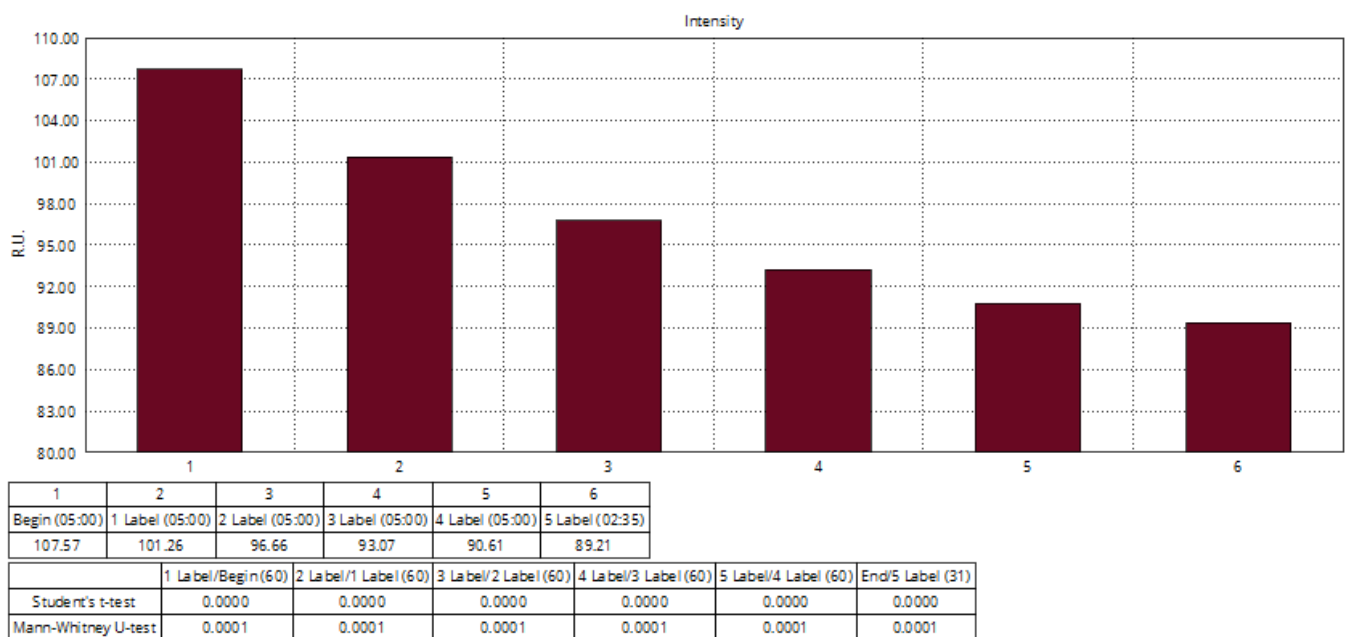
If you point mouse cursor on any dot on the graph and click the right mouse button – you will add a new label. You will be prompted to enter the name of the new label.

Once you have finished editing labels manually – click “Calculate” button to get the statistical analysis of the 4 parameters for the periods between the labels that you have added.

The Bio-Well Server will calculate parameters for all labeled intervals and parametric / non-parametric statistical values. Every interval is compared with the previous interval (pic. 78).

*NB! For more correct statistical analysis please make sure that intervals that are compared to each other contain same time period in them. In example, each interval is 5 minutes long – then they will contain equal number of images in them. Time volume of the intervals depends on the kind of phenomenon under study.*

In this report you can scroll through the pages with 4 different parameters calculated for every interval specified. You can “Save as picture”, “Save as PDF”, “Save as CSV” or print this report.



*Pic. 78. Statistical analysis of the intervals between the labels in the “Environment” Scan.*


Standard report consists of 4 pages: one page for each parameter – Area, Intensity, Energy and Entropy.

There is one more parameter that Bio-Well Software is able to calculate for intervals that are more than 360 GI long - Activity Level of Environment (ALE). Remember that 360 GI can take minimum of 6 minutes and maximum 6 hours – depending upon the interval you have set between GI. This is an experimental parameter that is trying to analyze how auspicious is the space for a living being. This

parameter was developed for experiments with Sputnik sensor only. If at least one of the intervals in your experiment is 360 GI long – then your report will have 5<sup>th</sup> page with ALE parameter value.

## Comparing Scans

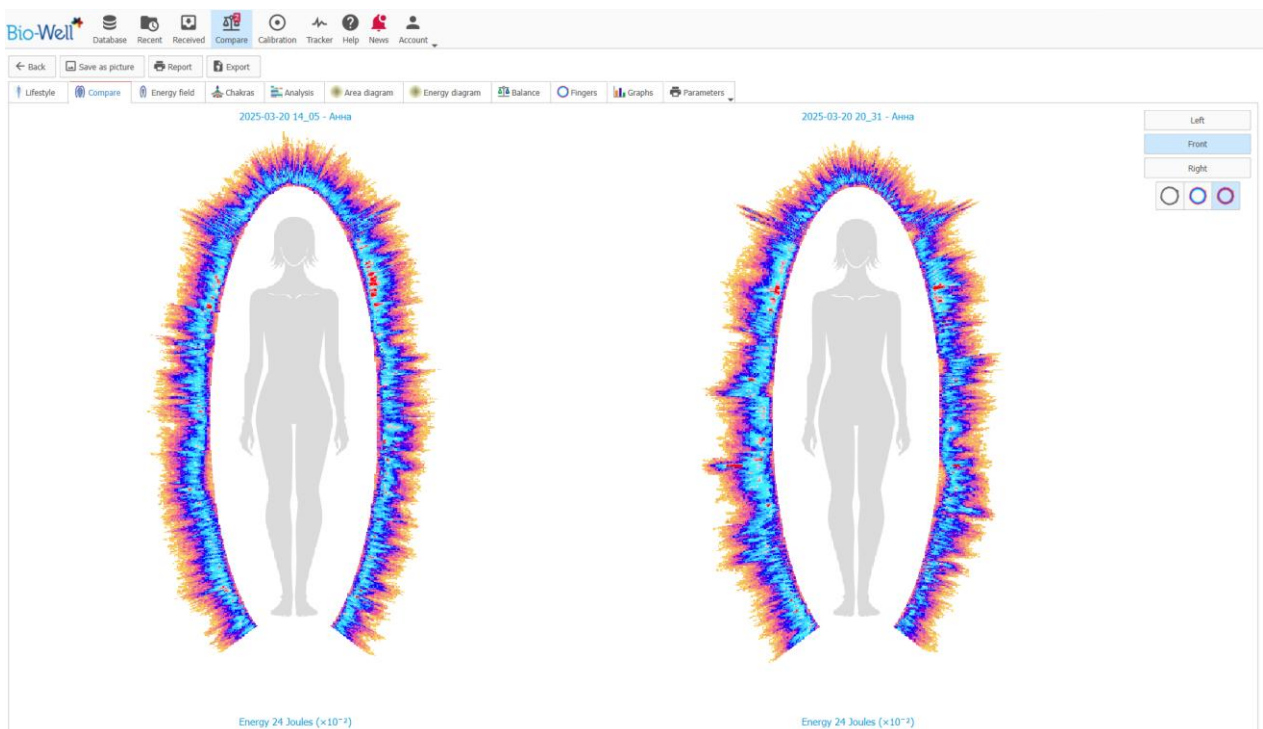
Results of the Scans that you select in the Scans list are automatically downloaded from the Bio-Well Server. Select multiple Scans at a time that you want to compare by using “CTRL” or “SHIFT” buttons on your keyboard – results of all the selected Scans are going to be downloaded one-by-one. Once the download process is finished (you can see it by the download completion percentage in a small circle near the Scan name) you can click “Compare” button at the top of the Scans list column. All selected and downloaded Scans will be sent for compare. You will see number in a red circle at the “Compare” button.

Click  Compare button and you will be redirected to the screen with the list of Scans that are going to be compared. To proceed click “Compare” button at the right top corner and you will be redirected to the special interface for comparing different types of Scans.

Click “Clear All” button to clear the list of compared Scans.

77

## Comparing “Full Scans”



Pic. 79. Comparing Full scans.

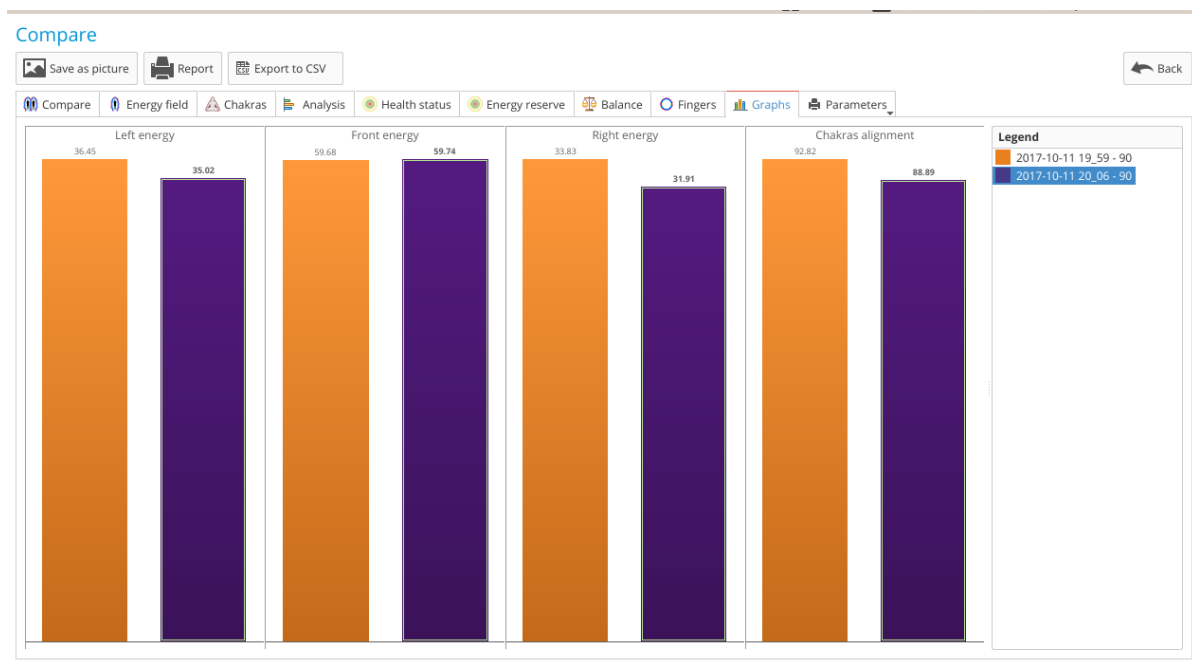
If you are comparing “Full Scans” then you will see special interface (pic. 79). Here you can click “Save as picture” button in order to save the graphs or images from any tab, “Export to CSV” button if you want to analyze the parameters in any program for statistical analysis (Microsoft Excel, LibreOffice Calc, Algorithm, etc.), or “Report” button to create an automatic comparing report (it has the same functions as a regular “Full Scan” report).

All the tabs are almost equal to the ones in “Full Scan” result with the graphs and diagrams overlaid. You can select which one to highlight by clicking the name of the Scan at the “Legend” column in the right part of the screen (pic. 80). Each of the Scans compared has its own color.

On the “Compare” tab you can select “Left”, “Front” or “Right” projection of the Energy field view and also the “Chakras” graphs.

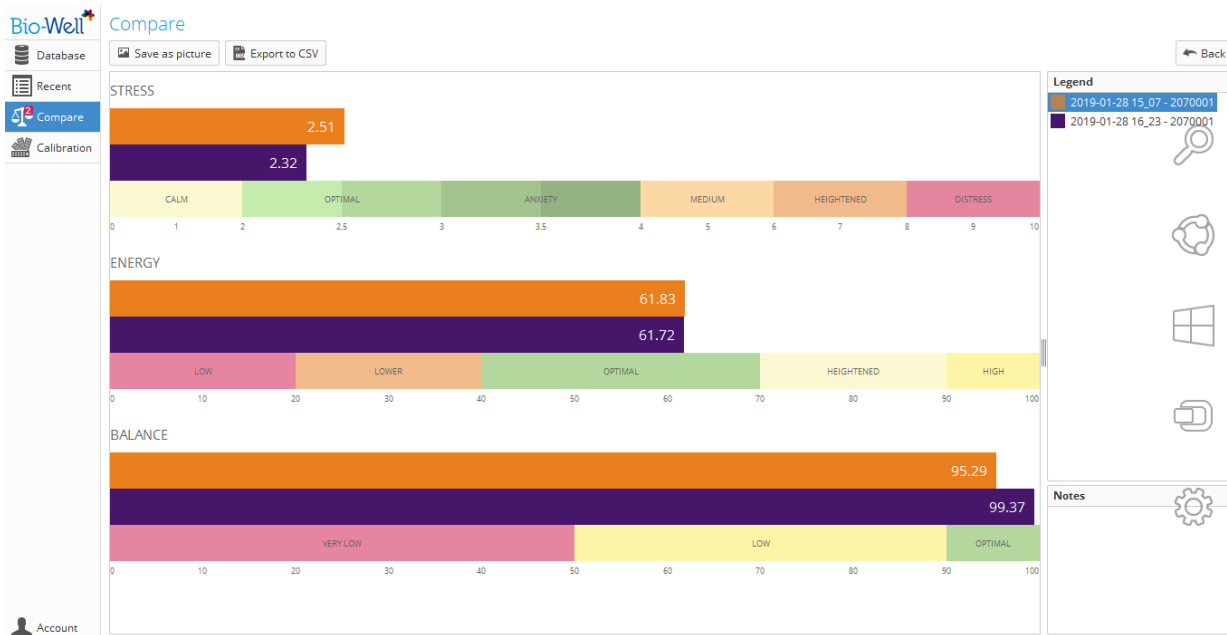
Parameters from this tab are present in another way on the “Graphs” tab: “Left”, “Front” and “Right” projection Energy values, and Chakras Alignment parameter are shown (pic. 80).

On the “Energy Field” tab you will see the outer contour comparison.



Pic. 80. Graphs tab view in “Full Scan” compare.

## Comparing “Stress Test” Scans

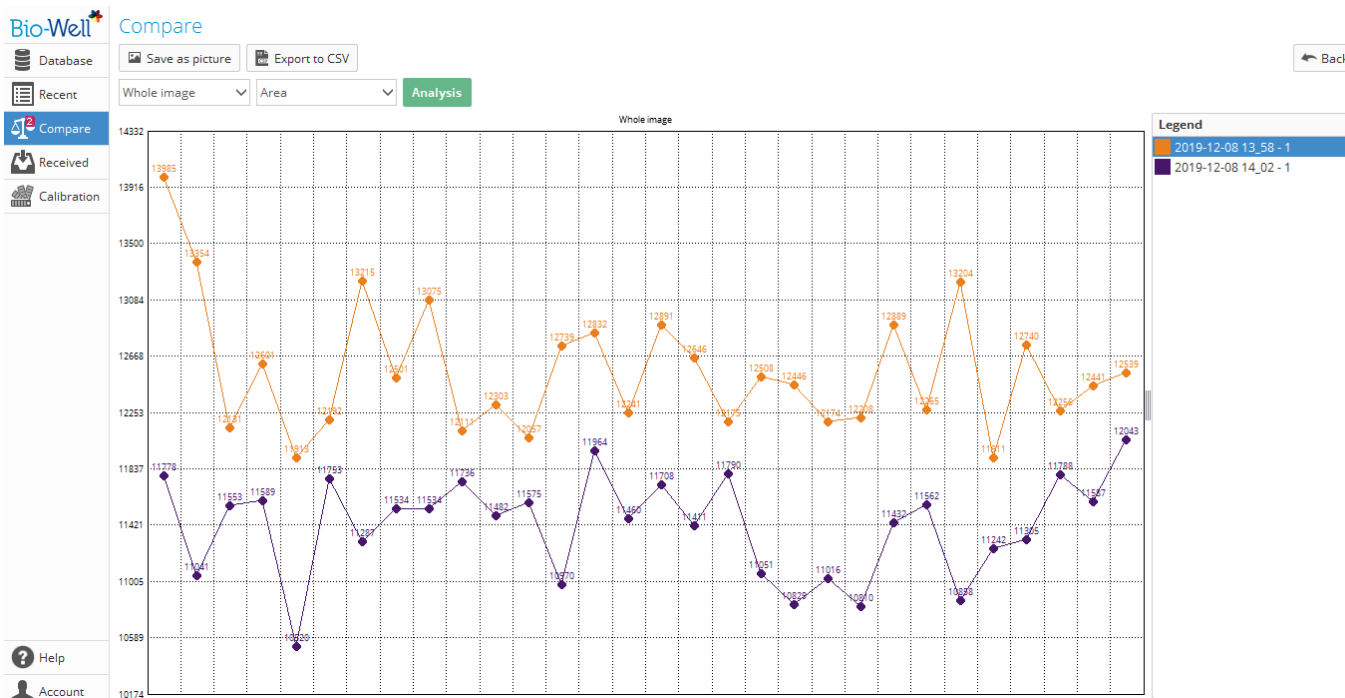


Pic. 80.

Pic. 81. Comparing Stress test scans.

If you are comparing “Stress test” Scans you will see such interface (pic. 81). Here you can click “Save as picture” button in order to save the graphs or “Export to CSV” button if you want to analyze the parameters in any program for statistical analysis (Microsoft Excel, LibreOffice Calc, Algorithm, etc.).

## Comparing “One Finger” Scans



Pic. 82. Comparing «One finger» scans.

If you are comparing “One Finger” Scans then you will be able to select the “Whole image” or specific sector from a drop-down list for which you want to see the graph, and select any of the calculated parameters from the drop-down list.

To see the “Box-with-whiskers” plot view click the button “Analysis” and you will get a statistical analysis of the graphs that makes it easier to compare the graphs between each other (pic. 83).

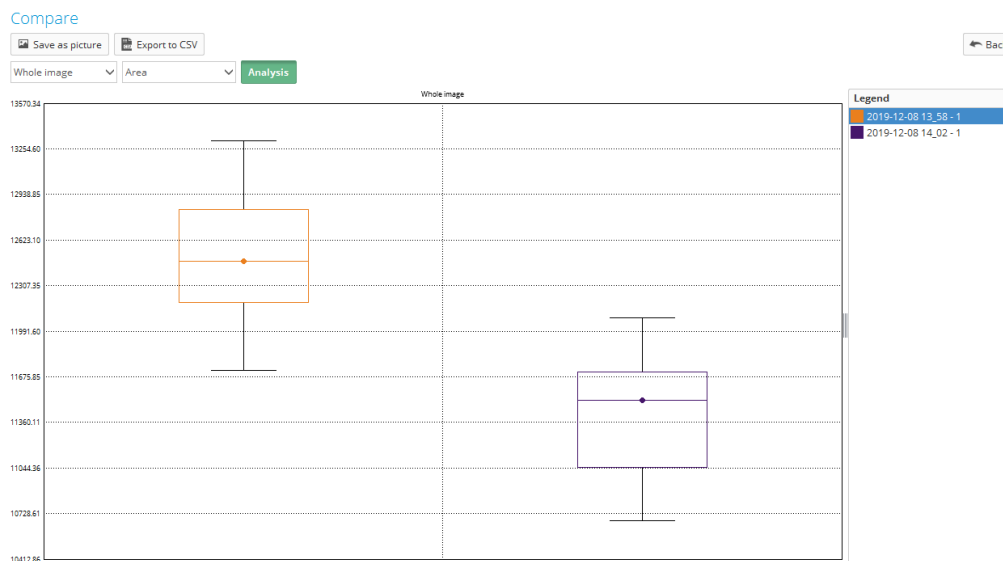
Minimum (lower whisker): the lowest data point.

Maximum (higher whisker): the largest data point.

Median (Q2 / 50th Percentile – line with dot in the middle of the box): the middle value of the dataset.

First quartile (Q1 / 25th Percentile – the floor of the box): is also known as the lower quartile  $q_n(0.25)$  and is the middle value between the smallest number (not the minimum) and the median of the dataset.

Third quartile (Q3 / 75th Percentile – the ceiling of the box): is also known as the upper quartile  $q_n(0.75)$  and is the middle value between the largest number (not the maximum) and the median of the dataset.



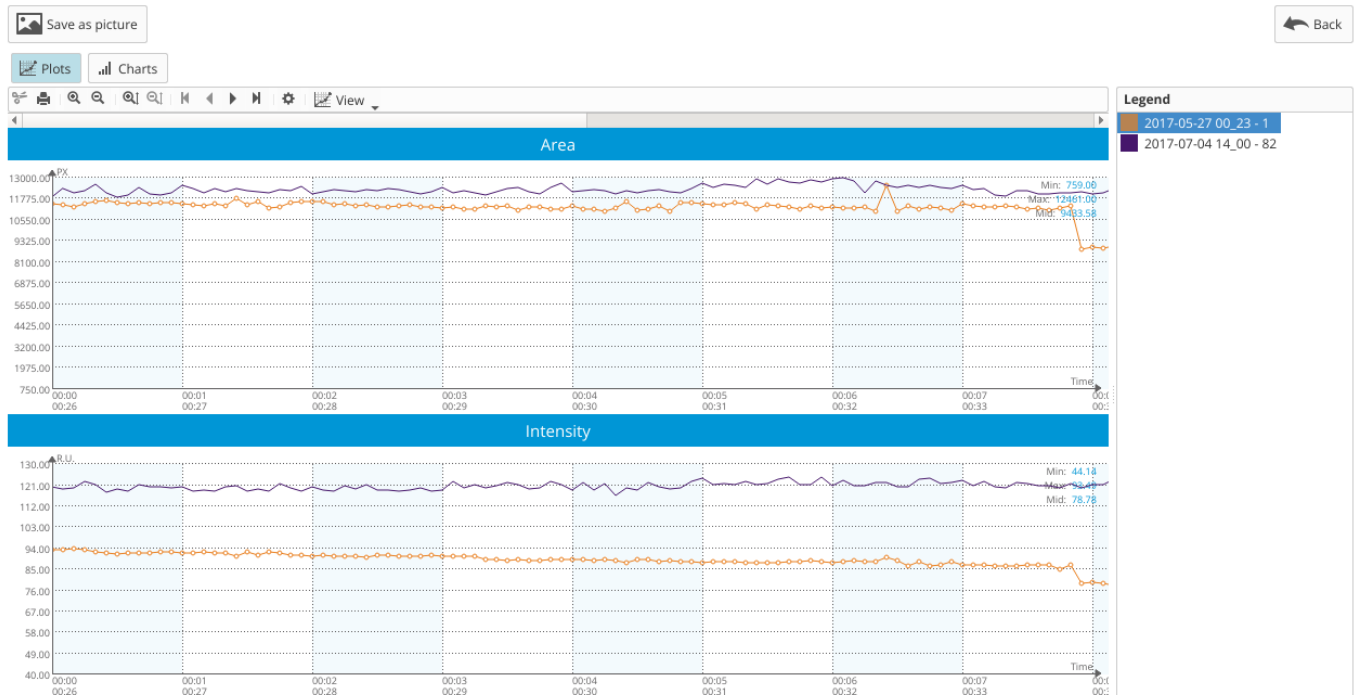
Pic. 83. Comparing «One finger» scans: “box-with-whiskers” view.

There is a possibility to save the values of all parameters from all the images in CSV format for further processing in Microsoft Excel, LibreOffice Calc, Algorithmand other similar programs – just click “Export to CSV” button, specify a name of the file and a folder in which you want to save it.

## Comparing “Environment” Scans

If you are comparing “Environment” Scans then you will be able to compare the data in two variants: Plots (pic. 84) and Charts (pic. 85).

## Compare



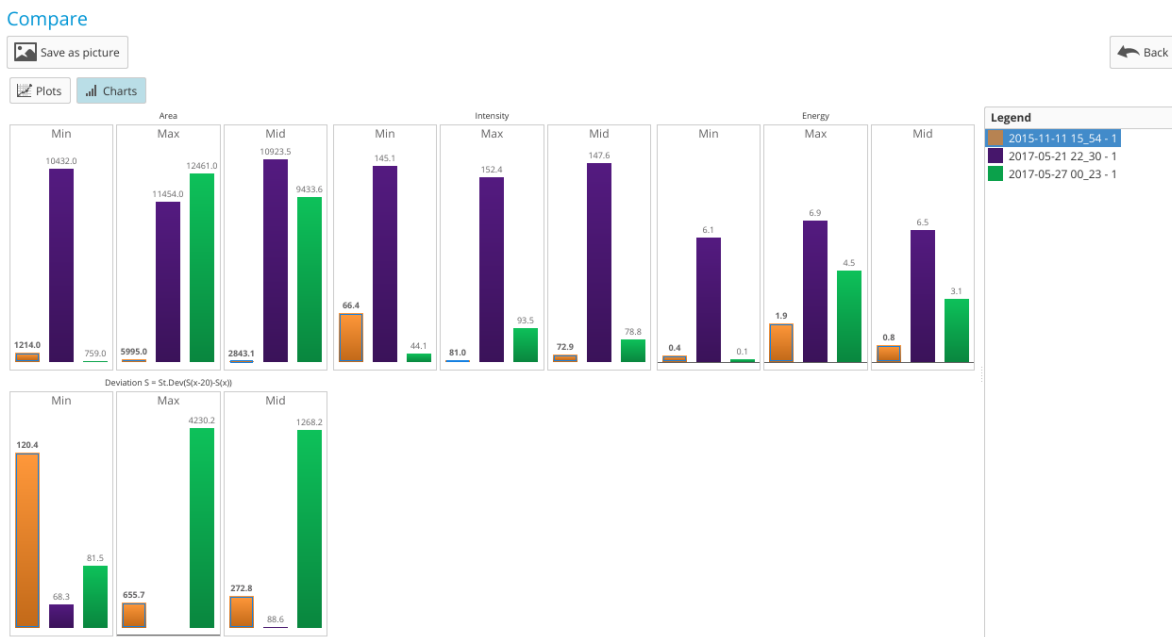
*Pic. 84. Comparing "Environment" Scans: Plots view.*

Here you can click "Save as picture" button in order to save the plots. Each scan has an assigned color that you can see in the right column. You can use top bar with standard features that were described earlier in this manual.

In the Charts view you will see Maximum, Minimum and Average values for: Area, Intensity, Energy and Entropy parameters (pic. 84).

These values are calculated from the whole time of the experiment. Labels are not taken into consideration during comparison of "Environment" Scans.

To return back to the list of Scans selected for comparison click "Back" button.



Pic. 85. Comparing "Environment" Scans: Charts view.

## Offline Mode

Scans can be made without Internet connection. Data will be saved on the computer and processed when the Internet connection becomes available. 82

In Offline Mode it is necessary to add a Name, Date of birth (or date of the experiment in case of making "Environment" Scan) and Gender (not needed for "Environment" Scans) and select the mode of the Scan (pic. 86).

Please note that during Offline measurements there is no Internet connection to the Bio-Well Server, so no processing of the obtained data is possible. This will lead to several nuances:

1. During "Full Scan", "Stress Test" and "One Finger" Scans blue line (top of the finger) will not appear, so you have to be much more precise in positioning of fingers while doing these Scans in Offline mode.

2. During "Environment" experiments you will not see any plots in real time on the screen and it will stay blank, as all the processing of images takes place on the Bio-Well Server.


Offline Scans are saved as BDF files on the computer's drive. When next logged in online, an "Upload" button will appear; click it to send the data to the Bio-Well Server to be processed.



*Pic. 86. Offline mode interface.*

## Previous GDV Readings

83

During scanning process previously saved images may be opened with the Import button . This allows users of other EPI/GDV instruments to use the Bio-Well Software. A Card must first be created to be associated with the data to be imported.

Remember that your account is limited to 1 ChipID by default, so Bio-Well Software will not allow you to use images taken by the devices with ChipIDs not associated with your account.

If you want to import images from another device you have to increase the limit of devices on your account by visiting your private cabinet on [www.bwacc.com](http://www.bwacc.com).

## Calibration guidelines

As long as gas discharge depends on the condition of the gas — it is very important to tune the device to the environmental conditions in which Scans are made. During calibration Bio-Well Software and Bio-Well GDV Camera device are tuned to the environmental conditions.

**Calibration should be made in the following situations:**

- **You move to another room.**
- **Sun/moon eclipse.**
- **Change of weather conditions: 5% relative humidity, 5°C temperature, etc.**
- **Magnetic storms.**
- **Changes in the environment conditions: a lot of people entered the room, many electronic devices were switched on/off, windows were opened/closed, usage of another computer with the Bio-Well GDV Camera device, etc.**

**Even if you just open a window - chemical composition of the air can change significantly - you will have to recalibrate the Bio-Well GDV Camera device to maintain the reliability of the data obtained.**

84

*NB! To ensure reliable results in each Scan we recommend to recalibrate the Bio-Well device every day before you start capturing process.*

### Calibration procedure for BW 1.0 model:

1. Connect the USB cable to the Bio-Well GDV Camera device and computer.
2. Put the Bio-Well GDV Camera device on the white stand as it is shown on the pic. 85. If you have positioned it correctly – you should easily see the label with the serial number on the bottom surface of the Bio-Well GDV Camera device.
3. Remove the finger insert by holding the unit firmly while gently pressing downward and pulling outward (insert the thumb inside the insert and hold the insert between the thumb and index finger, then pull out the finger insert).
4. Clean the glass electrode with a cloth (you may use alcohol).

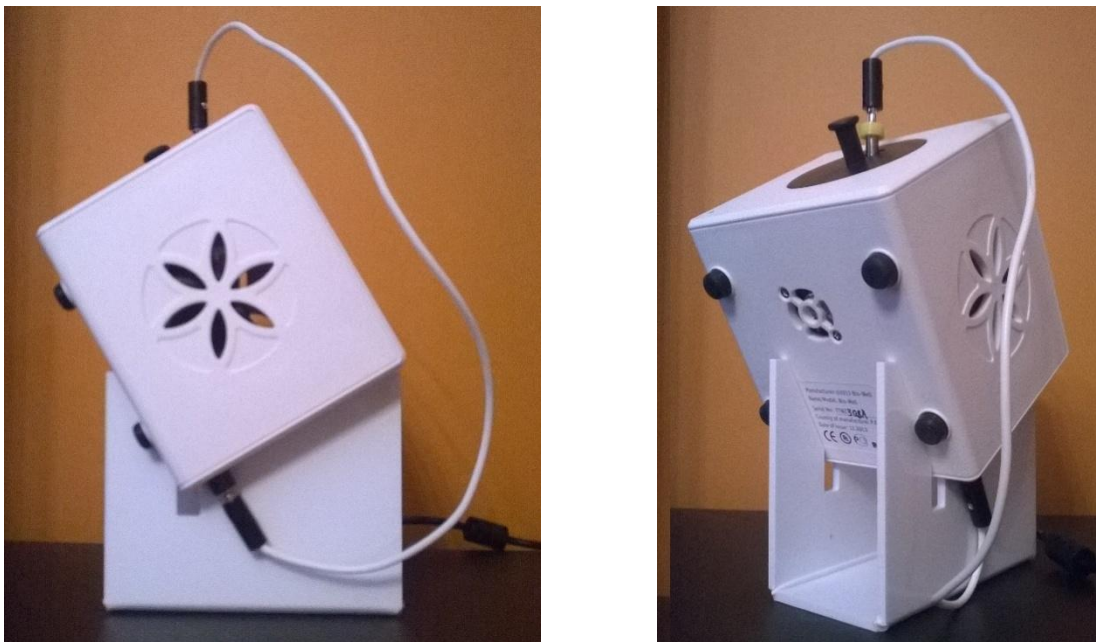
*NB! In dry conditions it is mandatory to clean the glass electrode with wet tissue to get rid of the static charge, while in wet conditions it is mandatory to finish cleaning by wiping with dry paper napkin to get rid of the excessive moisture.*

5. Connect the grounding cable to the spring knob on the top of the calibration insert (doing this after inserting the unit may damage the glass inside).

6. Insert the calibration metal cylinder insert by raising and holding back the spring knob while carefully pushing the unit in until it clicks into place. Then, gently lower the spring knob until it rests on the glass. Then, press it down vertically to make it even.

*NB! Do not let the spring lower quickly or abruptly, and be sure to not rotate the knob without first raising it. Failure to follow these procedures may result in scratching the glass, which is not covered by the warranty.*

7. Connect the other end of the grounding cable to the port («ground/earth») located at the rear of the Bio-Well GDV Camera device (pic. 87).



*Pic. 87. Bio-Well GDV Camera device 1.0 on the calibration stand.*

8. Click “Start button. For the new model of calibration tool (without sponge inside) the white stand is not needed. Test image will appear (see on the right). It should display a full ring. If the image is having noise inside or distorted, clean the glass electrode and the cylinder with a cloth again and carefully check the position of the spring knob to be sure the metal cylinder is resting evenly on the glass (raising before adjusting).

*NB! Each calibration cycle is equal to 20 captures with 5 seconds interval.*

9. If calibration is successful after the first cycle — click «OK» in the pop-up window — calibration is completed.

If parameters of the Glow are not in the normal region (established on the Bio-Well server) — then server will send a command to the Bio-Well GDV Camera device to change the voltage of the impulses accordingly, and restart the calibration cycle again automatically after 30 seconds interval. During this interval please gently take out the metal cylinder insert, ventilate the air above the glass electrode, wipe it again and put the metal cylinder insert back.

*NB! If you will not make all the above mentioned procedures within 30 seconds interval between the cycles — program will show error message and you will have to start next cycle manually by clicking «Start» button again.*

Bio-Well Software will repeat the calibration cycle as many times as needed to attain the normal parameters settings (Area and Intensity of the Glow).

Usually it takes up to 4 cycles in normal environmental conditions.

10. Once the process is finished — remove the metal cylinder insert and connection cable from the Bio-Well GDV Camera device.

86

### **Calibration procedure for BW 2.0 model:**

1. Connect the USB cable to the Bio-Well GDV Camera device and computer.
2. Remove the finger insert by holding the unit firmly while gently pressing downward and pulling outward (insert the thumb inside the insert and hold the insert between the thumb and index finger, then pull out the finger insert).
3. Clean the glass electrode with a cloth (you may use alcohol for cleansing the glass).

*NB! In dry conditions it is mandatory to clean the glass electrode with wet tissue to get rid of the static charge, while in wet conditions it is mandatory to finish cleaning by wiping with dry paper napkin to get rid of the excessive moisture.*

4. Insert the calibration metal cylinder insert. Don't worry, new model of calibration tool can not damage the glass electrode.

5. Connect the grounding cable to the spring knob on the top of the calibration insert.
6. Connect the other end of the grounding cable to the port («ground/earth») located at the rear of the Bio-Well GDV Camera device (pic. 88).



*Pic. 88. Bio-Well GDV Camera 2.0 prepared for calibration.*

87

7. Click “Start” button and wait for 20 seconds. Software will calibrate the device automatically.
8. Click “OK” in the pop-up window. You will be automatically redirected to the main screen of the Bio-Well software.

### **Calibration procedure for BW 3.0 model:**

1. Connect the USB cable to the Bio-Well device and computer.
2. Remove the finger insert by holding the unit firmly and rotating it counter-clockwise.
3. Clean the glass electrode with a cloth (you may use alcohol for cleansing the glass).

*NB! In dry conditions it is mandatory to clean the glass electrode with wet tissue to get rid of the static charge, while in wet conditions it is mandatory to finish cleaning by wiping with dry paper napkin to get rid of the excessive moisture.*

4. Insert the calibration metal cylinder insert. Hold it in such a way that cylinder on the spring faces downwards. Rotate it slightly counter-clockwise, then insert into the device and rotate clockwise to fix the position.



*Pic. 89. Bio-Well 3.0 calibration insert position.*

*NB! Please be careful: there are 2 types of inserts with metal cylinder supplied with each BW 3.0 device – one is for calibration; another one is for the Bio-Well accessories. The accessories insert is not suitable for calibration – it doesn't have a grounding contact inside.*

88



*Pic. 90. Bio-Well 3.0 calibration insert. The marked contact plate is for grounding of the calibration insert. (There is no such contact on the Accessories insert).*

5. Click “Start” button and wait for 20 seconds. Software will calibrate the device automatically.

6. Click “OK” in the pop-up window. You will be automatically redirected to the main screen of the Bio-Well software.

If your calibration insert get lost or broken - you can still calibrate BW 3.0 device: use the accessories insert and the wire to connect the insert with the ground exit on the rear surface of the BW 3.0 device.

**ENJOY USING BIO-WELL!**

