Report on BAE Synergy Cream Study

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1. PURPOSE OF THE WORK.

The present report has the purpose to present the results of the research for revealing influence of BAE Synergy Cream and compare ones with influence of other creams.

II. MATERIALS AND METHODS OF ANALYSIS
GDV-graphy method
The principles of GDV-graphy might be described as follows (Fig.1). The subject 1 is placed on a dielectric plate 2. A transparent conductive grid of a special design is applied to the reverse side of this plate. Voltage impulses are then applied by the generator of electromagnetic field (EMF) 5 between the subject 1 and the dielectric plate2.
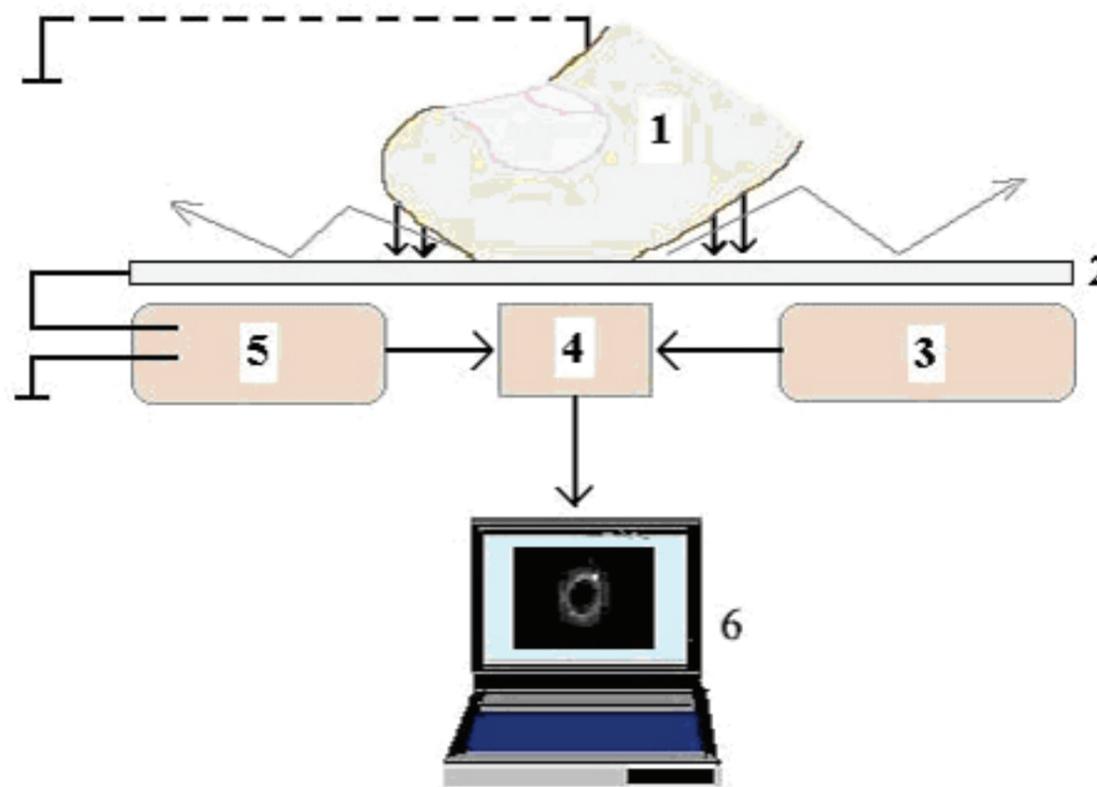

Figure 1. The schematic representation of the device for investigation of GDV characteristics of object and his equivalent scheme: 1 - object; 2 - a transparent electrode; 3 - the optical scheme; 4 - the videoconverter; 5 - electronic blocks, EMF generator; 6 - the processor for processing of the videosignal.

Under the high intensity field, the subject emits a burst of electrons and photons. In the gaseous medium of the contact between subject 1 and plate 2, an avalanche and/or sliding gas discharge (GD) develops, which serves as amplifier of the weak subject's emission. This process is very similar to the amplification processes in photomultipliers. With the help of an optical system and a CCD-camera 3, (charge coupled device) the discharge's fluorescence is transformed into video-signals, which are recorded in the form of single shots (GDV-grams) or AVI-files in the memory unit 4, connected with computer data processor. The data processor represents a specialized software complex, which allows the calculation of the system of parameters and, therefore, the possibility of drawing diagnostic conclusions.

Despite the variety of technical explanations, the essence of the visualization procedure might be summarized as follows: As a result of the interaction of the electromagnetic field (EMF) with the subject, the emission of charged particles causes the gas discharge to occur from the surface of the subject. It is important to note that the gas discharge itself might influence the subject's state, causing secondary emission and thermal processes.

Thus, within the gas discharge visualization procedure, informative transformations are being formed as follows. A bio-subject's state is characterized by physiological and biochemical processes. From the standpoint of the GDV procedure, the key role is played by quantum emission processes, as well as by the gas release. The gas release depends on the activity of sweat glands, i.e. on the autonomic nervous system functioning. Emission processes are dependent on the bio-subject's level of impedance (resistance or reactivity to the current), impedance of the surface areas, and the bio-subject's structural and emission characteristics. Change of the latter parameters is actively manifested on the skin at the expense of reflexogenous zones and biologically active points.

During the course of their investigations, researchers discovered that a complex of parameters and peculiarities of the organism; relating both to the processes of homeostasis of the whole organism and to the local electro-chemical phenomena, which occurring on small part of the skin, are manifested on the GDV image.

Geometrical and brightness parameters of GDV images bear the information on characteristics of the object. They are: the Area of the image - determined as the sum of pixels which have brightness higher than a certain threshold; Intensity of images - average intensity of image of all points with a non-zero intensity, changing within the range from 0 (absence of glow) to 255 (maximal brightness of glow); Form Coefficient - determined as the ratio of the perimeter length of the image to its average radius multiplied by 2p ie. irregularity; Informational Entropy by isoline of image - determined as

$$S(M) = -\sum_{j=1}^{J \leq M} P_j(M) \ln(P_j(M))$$

where $P_i(M) = N_i/N_M$ denotes the distribution function of values of intensities of points by the image isoline, i.e. the probability of revealing the value of intensity j (N_j - quantity of points with the same value of intensity in the image isoline) in the range of points of isoline with length M (N_m - number of all the points in the image's isoline); Fractality - fractal dimension of isoline of the image); GDV Activation (Stress factor) - relation the glow of fingers determined by parasympathetic and sympathetic nervous system.

All explorations were carried out in a range of temperatures from 27 up to 32 Celsius degrees with the help of the GDV Camera device.

POMS Test
In the research, the determination of psychoemotional status was carried out. The psychoemotional status was obtained with the help of the POMS (Profile of Mood State) test by definition of six parameters (factors): tension-anxiety (?), depression-dejection (D), anger-hostility (?), force-activity (V), fatigues-inertia (F), and confusion-bewilderment (C).

The following equation was used to characterize the psychoemotional potential:
TMD = [(T + D + A + F + C) -V], (1)

- where V, T, D, A, F, and C are parameters of the POMS test.
TMD = [(T + D + A + F + C) -V], is another important parameter of POMS test and it is highly reliable because of the intercorelations among the six primary POMS parameters.

Experimental Methods
Three groups of volunteers with six-seven people in each group have been investigated to detect their reactions to influence of BAE Synergy Cream and another two types of Creams (Olay Moisturizing Cream and Loreal Whitening Cream). Each group was used only one type of cream: Group 1 - BAE Synergy Cream; Group 2 - Olay Moisturizing Cream; Group 3 - Loreal Whitening Cream.

The experiments were done in two stages. At the first stage volunteers were subjected to the POMS test and the GDV-graphy of their fingers were obtained at the end of each week during six week.

At the second stage Creams are applied on the subjects' hands each day morning for seven weeks. At the end of each week volunteers also passed the POMS test and the GDV-graphy of their fingers.

III. RESULTS
Detailed data of experiments are represented at Attachment 1. Results of measurement of the GDV parameter Stress factor have significant changes after taking BAE Synergy Cream (Fig. 2). Significance was shown using Sign and Wilkoxson statistical methods of analysis. So GDV Stress factor have clear tendency to decrease.

From Fig. 3 and 4 it can be seen that after applying Olay Moisturizing Cream and Loreal Whitening Cream respectively, the stress factor have a tendency to decrease, but the results are not as significant as compared to BAE Synergy Cream. Also the coefficient characterized the angle of inclination of tendency to decrease is essential high (0.123) in case of BAE Synergy Cream than other two creams (0.045 in case of Olay Moisturizing Cream and 0.089 in case of Loreal Whitening Cream).
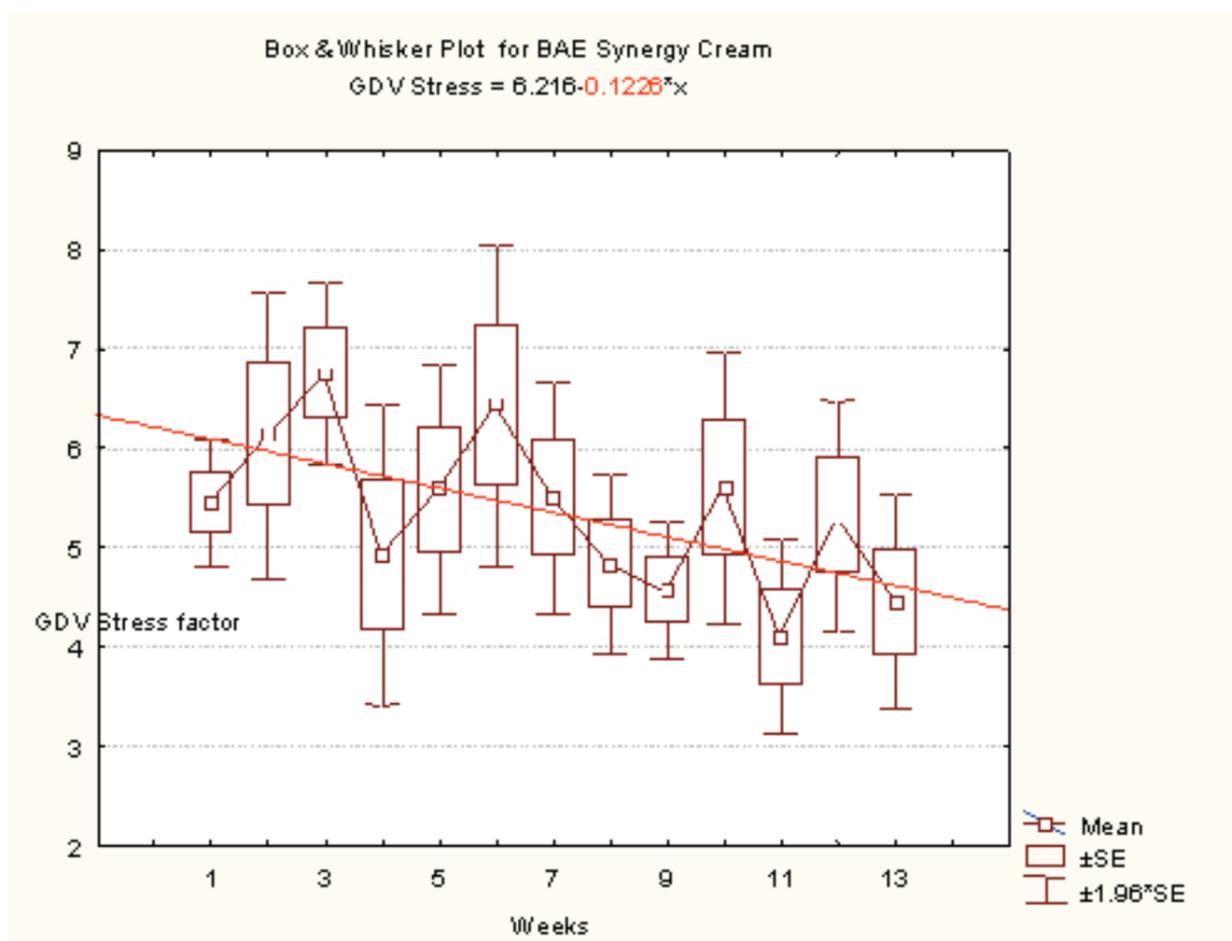

Fig.2. Significant decreases in the GDV Stress factor after applying of BAE Synergy Cream in time (weeks).
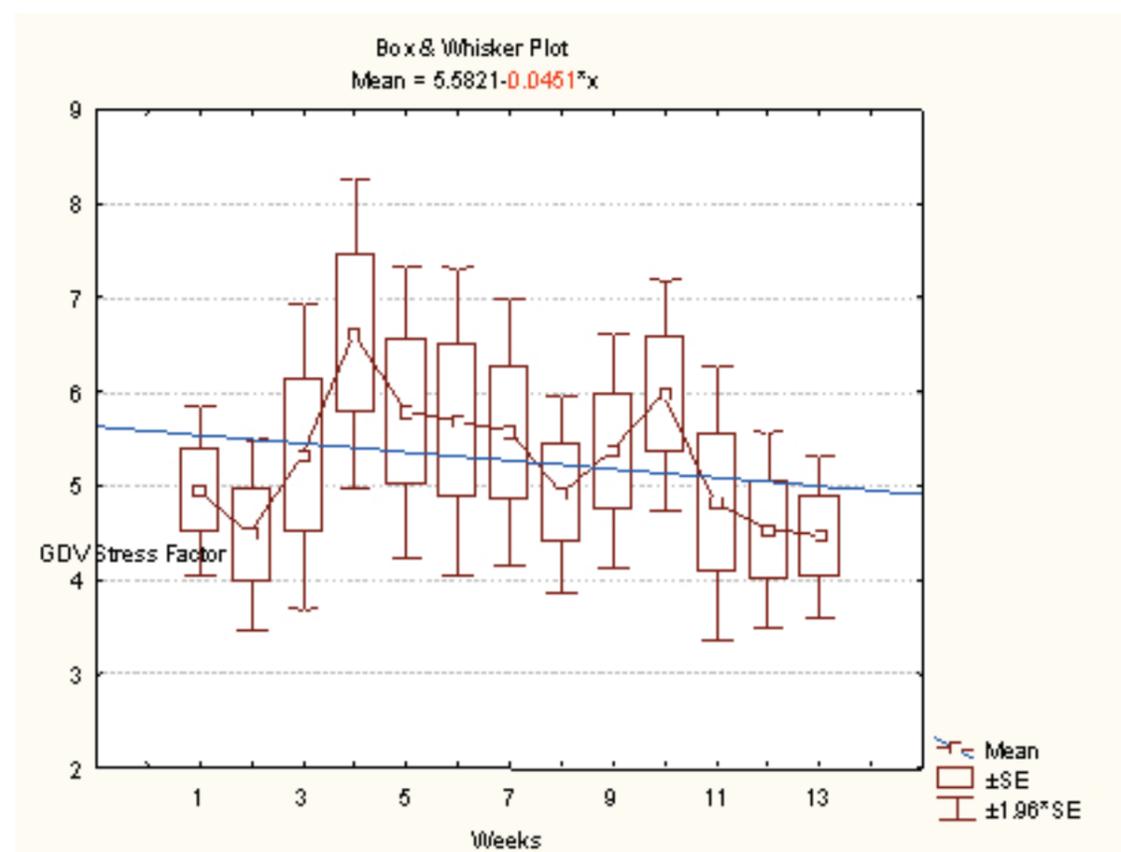

Fig.3. Non-significant changes of GDV Stress factor after applying of Olay Moisturizing Cream
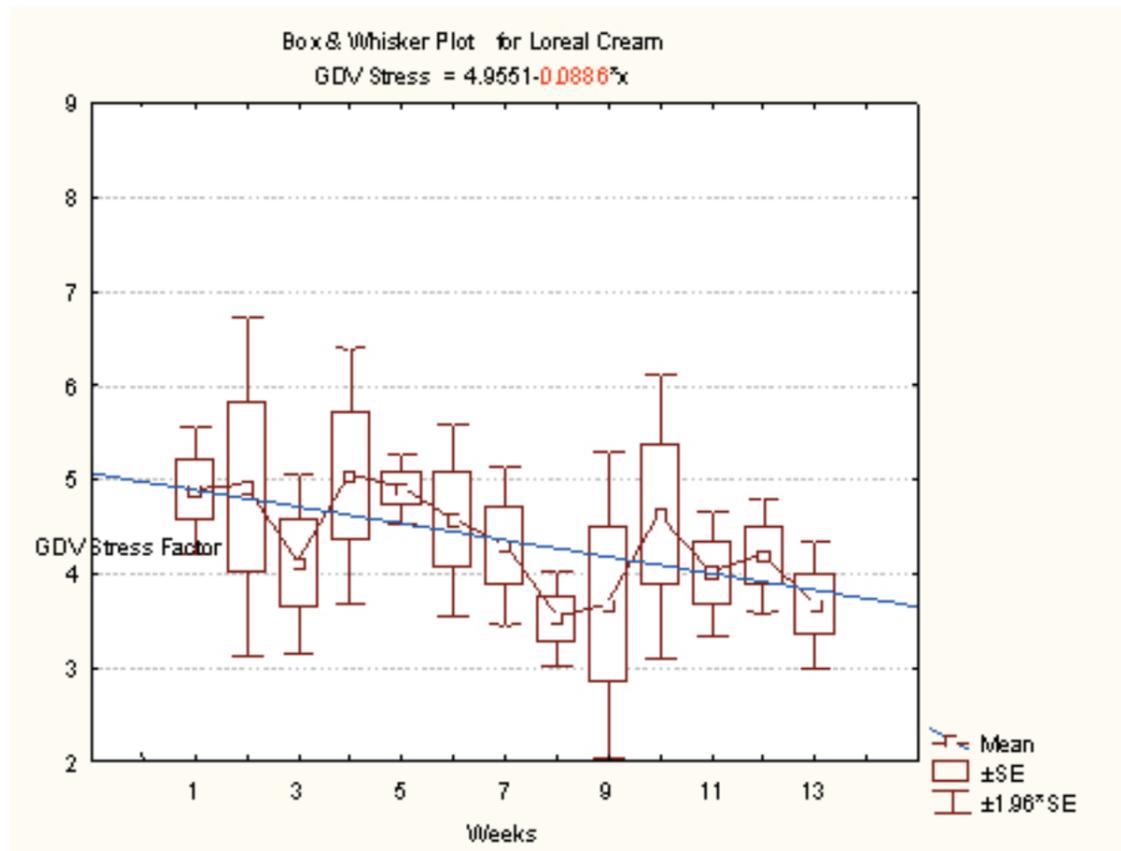
Fig.4. Slight changes of GDV Stress factor after applying of Loreal Whitening Cream.

Most significant changes revealed by the POMS test after taking BAE Synergy Cream are represented in Fig.5. It was shown that Tension-Anxiety index of subjects is reducing after taking of BAE Synergy cream.

In the case of Olay Moisturizing Cream, there is no any significant change in Tension-Anxiety index (Fig.6). In the case of Loreal Whitening Cream, we have even tendency for the Tension-Anxiety index to increase (Fig.7).

Other POMS parameters did not show any significant changes on the subjects after undergoing the creams test.
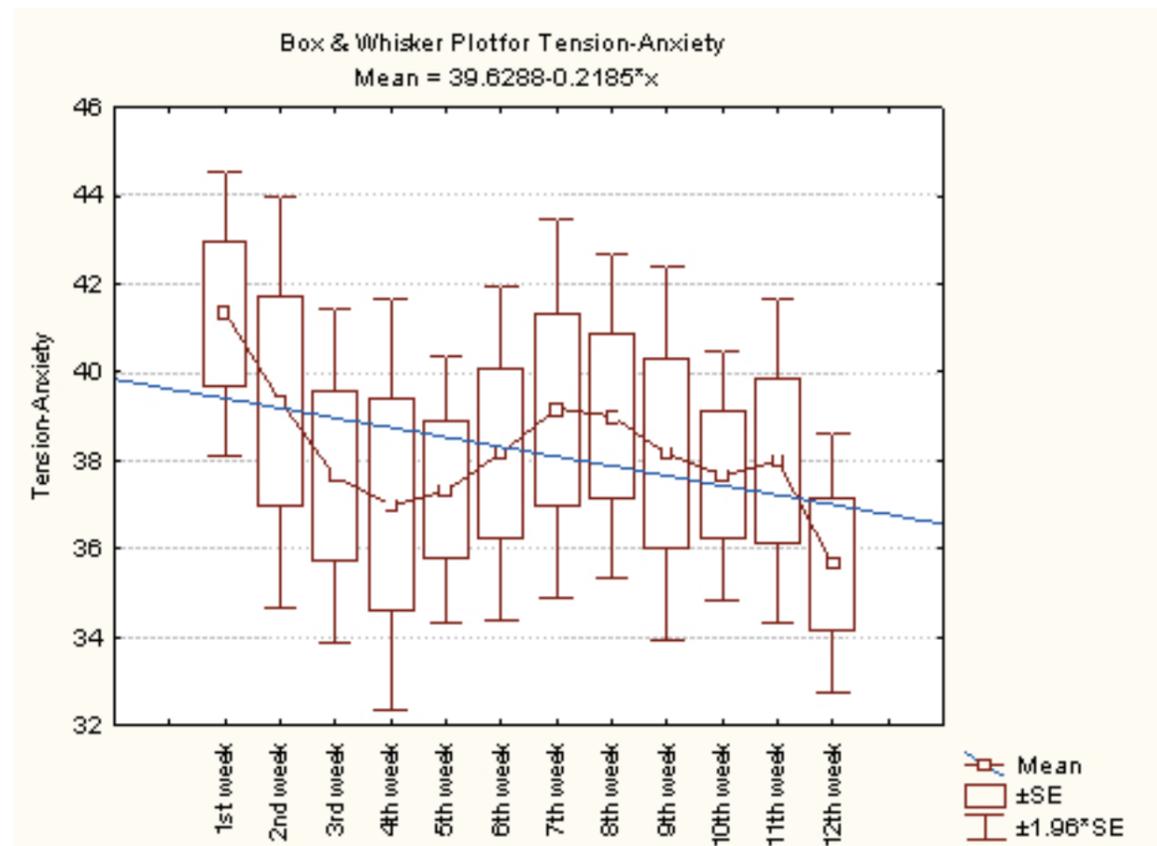

Fig.5. Gradually decreasing of Tension-Anxiety index after applying of BAE Synergy Cream.
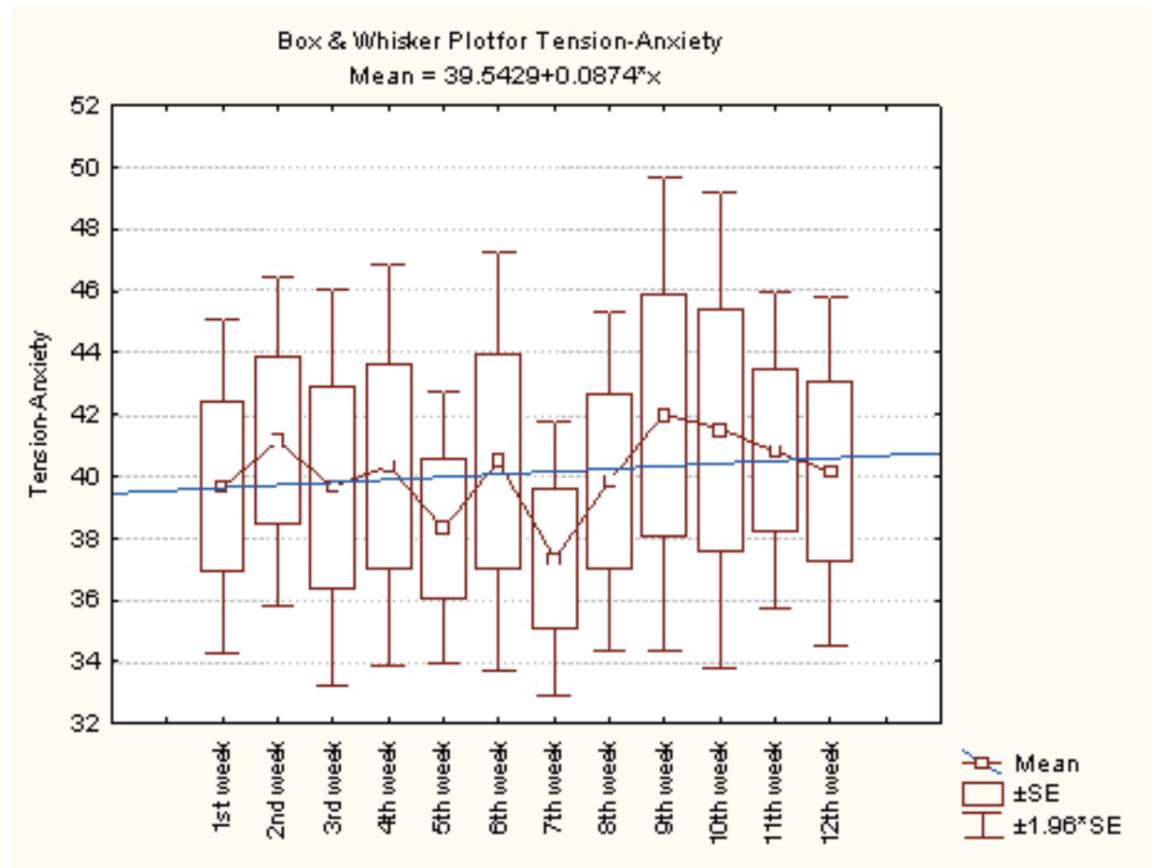
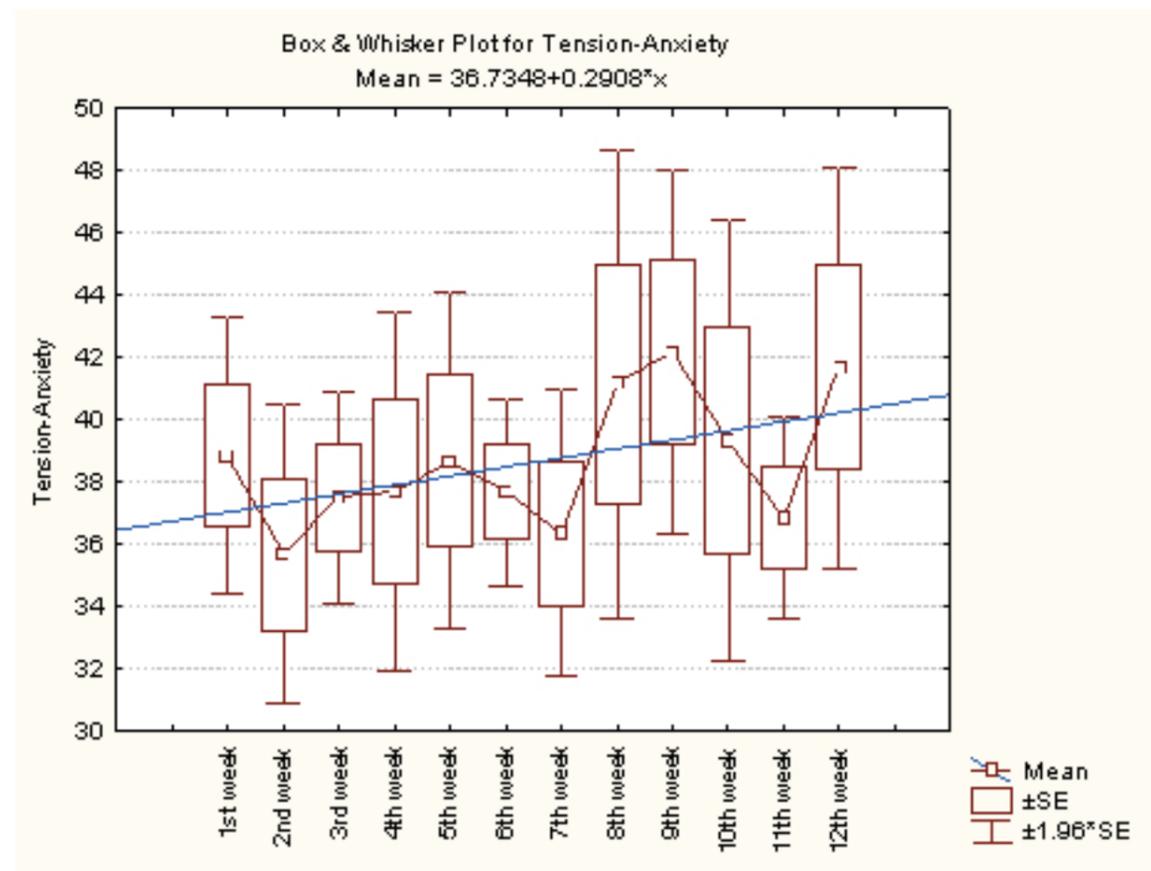Fig.6. Slight but non-significant changes of Tension-Anxiety index after applying of Olay Moisturizing Cream.

Fig.7. Significant increment of Tension-Anxiety index after applying of Loreal Whitening Cream.

IV. ANALYSIS

It had shown that results of GDV Stress factor gave clear tendency to decrease after using all three types of creams. However, statistical significant changes were revealed only in the case of BAE Synergy Cream by Sign and Wilkoxon tests. Changes are significant even after 1st week of BAE Synergy cream application. Decreasing of GDV Stress factor to the normal range (from 2 to 4) tells that subjects passing to more balanced rate between parasympathetic and sympathetic nervous systems (Fig. 2-4). This means achievement to more controlled and less tense psycho-physiological state.

The above statement can be further supported by the POMS test. Tension-Anxiety index of subjects were reduced during the application of BAE Synergy Cream (Fig.5) whereas it did not have positive changes in the case of other creams (Fig.6,7). The efficiency of BAE Synergy cream is decreasing of stress factor and Tension-anxiety is most significant after 6 weeks of application (Fig.5).

V.CONCLUSIONS

• BAE Synergy Cream has the ability to reduce stress, as demonstrated in the GDV Stress factor, and Tension-Anxiety index of the POMS Test.

• Loreal Whitening Cream and Olay Moisturizing Cream did not show the same result, which indicate that BAE Synergy Cream is more effective, as defined in the framework of POMS and GDV tests.

• Regular applying of BAE Synergy Cream can reduce tension as well as improve parasympathetic and sympathetic nervous system.

• Regular applying of BAE Synergy Cream can reduce tension and improve psycho-physiological state.

• Recommended period of time of regular applying of BAE Synergy Cream to achieve most significant result is six weeks.