

## **To the question of assessing the content of information in photographs with using various inanimate systems**

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In recent years, the increasing attention of researchers has been attracting the study of information interactions ( influences ), information transfer mechanisms between objects in animate and inanimate nature , development of methods and apparatus for evaluation of the content information , which is before the ( inside and outside ) objects . One of the important tasks in this direction is the further study of the possibility evaluate ( study ) the informational impact ( information content ) of an object not only directly , but also from his photograph . Positive results in this direction were obtained using apparatus for studying " fine - field " properties of objects and connections between them - torsimers [1, 2 , etc. ]. but when working with these devices, significant difficulties may arise , in particular , with multiple repetitions of research .

The purpose of the work is to further explore the possibilities of assessing the focus and information content of various objects using the Egypt torsimer and method of " drying drop ".

### **Material and methods**

We used in the study of glass balls ( diameter 60 mm ), a pyramid and its photographs , printed on a color printer , and the image of the triangle , circle and color photos of various volumetric objects , the components of which contained triangles and rounded shapes .

As one of the methods for registering information content of real objects and in their photographs used the torsimer " Egypt ". Each object measured at least 7 times , and the obtained values were averaged .

The second physical - chemical method , used in the work , was to determining the amount of crystals of regular shape , occurring on on a glass slide, after a drop of fresh sea water has dried on it The Adriatic Sea or salt solutions ( " drying drop " method ). For analysis of each object used at least 6 dried drops of solution .

In the control, the slides were placed on white paper , and in the experiments - in real objects or their images , printed on a color printer size 40 x 40 mm . After the droplet dried, the crystals on the glasses were photographed OLIMPUS camera (6 megapixel in super macro mode ). Received pictures processed using the CorelDRAW 11 program .

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### **Results and discussion**

In the first series of experiments, the effect of a glass ball on crystal formation in a drying drop . Table . 1 shows data on an amount of crystals of regular shape ( in the dried droplet ) on the slides , remote at different distances from the ball .

It turned out , that the proper amount of crystal forms of the dried droplet varies depending on the distance from the ball . So , in the droplet , located at distance of 10 mm from the ball , the number of crystals was somewhat higher , than in the control . As the droplet moved away from the ball at a distance of 35 mm, the number of crystals in it decreased.

in relation to the previous result by 18% (  $P < 0.05$  ).

Table 1. The effect of a glass ball on the amount of crystals in a drying drop .

### **Control distance from ball ( mm )**

**10 35 60**

**10.9 + 2.6 13.1 + 0.8 10.8 + 0.8**

**P <sub>2.3</sub> < 0.05**

**11.4 + 0.8**

**12 2 3 5**

In the second series of experiments, the influence of the image of a circle and a triangle was studied. on crystal formation in a drying drop ( Table 2). In a drying drop on slide , installed above the image of the triangle , the number of crystals was less , as compared to control ( at 46%) and compared with the image circle ( at 44%).

Table 2. The influence of the image of a circle and a triangle on the number of crystals in drying drop .

### **Control 1 Triangle Circle**

**13 + 1.8**

**P <sub>1.2</sub> < 0.01**

**7 + 0.9 12.6 + 1.7**

**P <sub>2.3</sub> < 0.05**

**1 2 3**

In the third series of experiments, the correlation of changes in parameter values was assessed , produced using physical - chemical method and torsimera " Egypt ."

Slides with drying drops were placed over the images

circle , triangle , and photographs of 3 volumetric objects . The same objects measured using the laser channel of the torsimer . It turned out , that the resulting using two different methods, the values were correlated with each other (  $r = 0.92$ ;  $P < 0.05$  ).

Thus , based on the results obtained and the data carried out earlier Studies [3 , etc .] it can be concluded , that torsimer " Egypt " and the method " Drying drops " of the solution can be used to estimate the content information about the various objects directly , as well as their images .

The results of this work also confirm our earlier formulated

provision that , that information - it's non-energy ( in the traditional sense

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of this word ) a substance ( impact ) reflecting the composition and properties of any object ( substances and fields , organisms ). In relation to material objects information , on - apparently , is located inside a material object , and outside him at an indefinitely large distance . This is confirmed by the above results of experiments with a ball and other objects .

Information about the object can be presented ( recorded , encoded ) on carrier . In this work, she was presented in photographs of various objects of research .

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