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## CLASSIFICATION OF MEANS OF FORENSIC TECHNIQUE USED IN THE INVESTIGATION OF PROPERTY CRIMES

*An important aspect of any scientific method as a whole, as well as technical and forensic methods, in particular their integral part, is a mandatory requirement for objective bias in the application of the necessary method and the inadmissibility of further subjective interpretation of the results.*

**Key words:** property crimes, forensic examination, human rights.

**Formulation of the problem.** Special technical means of forensic science are scientifically conditioned, verified experimentally and in practice effective technical means used by the subjects of criminal procedural, expert, operative-search and administrative activity.

The purpose of the forensic technique during the investigation is to collect and study evidence. That a wide arsenal of scientific and technical means are borrowed from various natural and technical sciences, as well as specially developed criminology science instruments and methods.

### **The purpose of the scientific article.**

Given the content of the notion of forensic technique, there are quite a number of views and approaches to the foundations of the classification structure of forensic science among criminologists, primarily due to the variety of grounds and criteria for their distribution to the relevant groups. Evaluating the system of technical and forensic means in general, we observe the constant expansion of classification groups, which is the result of the creation of new technical and forensic means.

### **A presentation of the main problem.**

#### 1. According to the source of origin (the branch-wise of scholarly knowledge):

- technical means developed in forensics for the collection and research of evidence (special);
- technical means borrowed from other sciences or branches of knowledge, but adapted for solving special forensic problems;

- technical means borrowed from other sciences or branches of knowledge that are used to ensure the investigation of crimes without constructive change.

#### 2. By purpose:

- technical means used by an investigator or a criminalist specialist to identify, extract and fix evidence;
- technical means used for the investigation of material evidence during forensic examinations;
- technical means used for fixing the course and results of investigative (search) actions;
- technical means used for the prevention of offenses.

#### 3. By special purpose:

- means of photo and video recording equipment;
- means of recording equipment;
- means of work with material traces for the purpose of their detection, fixation and further research;
- means of analytical work;
- search tools;
- means of collecting, storing and processing information;
- aids.

#### 4. By type of technical means:

- devices and equipment;
- tools and equipment;
- devices and materials;
- sets of scientific and technical means.

#### 5. Where the technical means are used:

- means of "field criminology", that is, the use of which during the investigation is provid-

ed outside the cabinet of the investigator (expert laboratory);

- means of laboratory technique.

6. By subject of use:

– technical means used by investigators (technical support of the investigator, techniques of the investigator);

– technical means of operative-search activity;

– technical means of expert research (expert technology, specialist technique);

- technical means of forensic prevention.

6.1. The technical tools used by investigators allow you to solve the problems of identifying, fixing, researching and demonstrating evidence. The general technical means used by the investigator include: means of illumination, measurement, fixation, research and concentration of forensic information, as well as optical means.

Facilities of lighting, or lighting equipment, are used for artificial lighting of areas, enclosed premises, objects or people during forensic and preventive activities. How to use such means are stationary and portable sources of lighting for household or special purpose. Lighting devices, depending on the nature of the spectrum of radiation, are divided into: ordinary, ultraviolet, and infrared laser.

Optical devices are devices used to identify sources of information that are not perceived by the human eye. To optical means we can include magnifying glass of different multiplicity of increase and destination (dactyloscopic, measuring, textile with illumination for work with tracks, binocular), microscopes (biological, metallographic, comparative, luminescent, polarizing, measuring, stereoscopic).

Means of measurement, or measuring technique, are used for the following tasks: for measuring length (ruler, complex meters, roulette, calipers, micrometers); for measuring angles (protractor, angle meter, angle grid); for measuring areas (metric grids); for measuring the volume of liquid bodies (beakers, measures); for measuring body weight (weights of different classes); to determine elasticity of bodies (solids, manometers).

Means of fixing – these are devices, equipment, technical kits, materials, by means of which it is possible to fix, copy, simulate or preserve the source of information on a material medium. In general, the concept of "means of fixation" can be interpreted very widely, since the use of these means is the fixation of the source. In the future, the use of fixing tools allows you to solve identification tasks.

Means of concentration and processing of forensic information. The need for collecting and concentrating information about past criminal offenses to address urgent needs during the

investigation arose at the stage of the birth of criminology, since the past experience has always been an example for the knowledge of the present. Means of concentration of steel records and file cards of various traces of crimes, persons who previously committed crimes, collections of means of committing crimes and objects with their footsteps.

With the commencement of computerization of law enforcement and the entire criminal justice process, new means of collecting, storing and processing information have arisen. Today, the processing facilities, the concentration and storage of information are also technical complexes of electronic computers equipped with technical software tools that allow you to enter the source information, process and store it.

6.2. Technical means of operative-search activity. By purpose, they represent the main means of field criminology, that is, equipment, devices, materials and accessories that are used not only by operational staff, but also by investigators during the investigation of criminal offenses. The technical means of operative-search activity by their essence have been divided into three types:

- Operational technology - a system of hardware, which is used in operational activities, mainly secret.

- Special equipment - technical equipment, which includes devices, devices, materials and substances that serve to collect information by secret methods. Such means are characterized by small sizes, usually masked under everyday objects of the furnishings, clothes or tools, work remotely or in offline mode.

- Special tools - rubber batons, handcuffs, light-emitting diode devices, water taps, etc.

The main difference between operational equipment and forensic technique is not the qualitative characteristics of the technical means, but the procedural and methodical aspects of its use. Forensic technique, unlike operational, is used during investigative (search) actions, and the results of its use give rise to procedural sources of evidence.

6.3. Technical means of expert research. The forensic units have laboratories of a certain profile, which is determined depending on the category of performed research. They have concentrated expert techniques for dactyloscopic, trasologic, ballistic research, forensic research papers, manuscripts, cold weapons, and the like. The profile of the laboratory is determined by the specifics of technical equipment and research methods. Technical means of expert research may be classified as follows: measuring equipment, lighting and image reproduction equipment, laboratory and microscopic technology, technical means of research in invisible

rays, micro-site and smells research tools, means of computerization and automation.

Measurement technology - these are devices designed for complex and accurate measurements of solids, gaseous objects, cavities, temperatures and microscopic objects. Measuring technique of expert laboratories is primarily characterized by the possibility of conducting measurements of any physical bodies in aggregate states.

Lighting means fluorescent lamps, incandescent lamps, as well as sources of ultraviolet, infrared, X-ray and laser lighting. The category and power of the source of lighting are selected depending on the specific situation and tasks solved by the expert.

Image reproduction means - reproduction of the object being studied, its characteristics, research results. Obtaining an image involves the use of a variety of techniques, but the most traditional is taking pictures, thermograph, holography, etc.

Laboratory equipment - devices and devices that serve as auxiliary facilities for researching objects. The laboratory equipment may include means of packaging and storage of material evidence, tweezers, magnifiers, tripods, energy sources, heating devices, simulations, etc.

Microscopic technology is a compulsory element of any laboratory and an integral part of an expert's toolkit. Regardless of the research profile, the expert laboratories are equipped with optical (biological, luminescent, ultraviolet, metallographic polarization, stereoscopic, measuring, projection), electric, scanning and tunneling microscopes.

The technical means of research in the invisible beams of the spectrum are devices by which it is possible to carry out research of real evidence in the ultraviolet, infrared and X-ray spectral parts.

Means of research of micro-particles and odors are sets of optical devices and micro-tools intended for work with micro-objects, as well as kits (an ophthalmic suitcase) for the study of smell traces by means of physical and chemical methods.

Means of computerization and automation – is a system of technical means that allows the formation of individual and spectral data banks, obtaining background information, creating specific research methods.

It is necessary to take into account the fact that during the research the expert can use the means and methods from any branches of science and technology, the involvement of which is necessary for the full solution of the tasks set before him, therefore it is practically impossible

to provide an exhaustive classification of means of expert technology.

6.4. Technical means of forensic prevention. Means of forensic prevention should be categorized according to the kinds of preventive tasks on the following groups:

- technical means used to identify facts that contributed to the commission or concealment of criminal offenses;
- technical means of protection of objects against criminal encroachments;
- technical means that create the conditions for the emergence of additional traces in the place of the commission of a criminal offense;
- technical means of obtaining information on criminal offenses that are being prepared;
- technical means of committing active psychological influence on persons inclined to commit offenses.

#### Conclusion.

Improvement of forensic means, expansion of scientific and technical possibilities of criminology by attracting knowledge from other branches of science, activating the problem of identity of science. It is well-known that the effectiveness of the use of technical and forensic means of detecting, fixing and researching traces during the investigation of crimes from the methods of their use, as well as the level of technical literacy, is directly related.

An important aspect of any scientific method as a whole, as well as technical and forensic methods, in particular, their integral part, is the mandatory requirement for the unbiased objectivity of the application of the necessary method and the inadmissibility of further subjective interpretation of the results.

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*Важливим аспектом будь-якого наукового методу в цілому, а також технічних і криміналістичних методів зокрема як їх невід'ємної частини є обов'язкова вимога об'єктивного застосування необхідного методу та неприпустимість подальшої суб'єктивної інтерпретації результатів.*

**Ключові слова:** майнові злочини, судова експертиза, права людини.

*Важным аспектом любого научного метода в целом, а также технических и криминалистических методов в частности как их неотъемлемой части является обязательное требование объективного применения необходимого метода и недопустимости дальнейшей субъективной интерпретации результатов.*

**Ключевые слова:** имущественные преступления, судебная экспертиза, права человека.

