SCIENTIFIC AND THEORETICAL FOUNDATIONS OF SAMPLES CLASSIFICATION FOR EXPERT EXAMINATION

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Abstract

Uzbek: The article analyzes the scientific and theoretical foundations of sample classification for expert examination. A comparative analysis of the classification systems of various scientists was carried out, and their common and distinctive features were identified. The logical rules, basic principles, and modern approaches to sample classification are considered. A comprehensive classification system has been developed, the theoretical and practical significance of which is substantiated.

Russian: The article analyzes the scientific and theoretical foundations of sample classification for expert research. A comparative analysis of the classification systems of various scientists was conducted, and their common and distinctive features were identified. The logical rules, basic principles, and modern approaches to sample classification are considered. A comprehensive classification system has been developed, and its theoretical and practical significance has been substantiated.

English: The article analyzes the scientific and theoretical foundations of sample classification for forensic examination. A comparative analysis of classification systems developed by various scholars has been conducted, identifying their common and distinctive features. The logical rules, fundamental principles, and modern approaches to sample classification are examined. A comprehensive classification system has been developed, with its theoretical and practical significance substantiated.

Keywords: Sampling for expert examination, comparative research, samples, classification, criminalistics, expert examination, scientific basis.

Input

The issue of classifying samples for expert examination is one of the urgent problems of criminalistics. The diversity of samples, the variety of conditions and methods for obtaining them, and their application in various examinations necessitate the creation of a scientifically based classification system[1]. Classification has not only theoretical, but also practical significance, and the correct selection and collection of samples directly affects the quality of the examination results. Therefore, it is necessary to deeply study and improve the scientific basis of classification.

Any scientific classification should be based on logical rules. When classifying samples, a single basis must be applied in the same classification, which ensures the consistency and logic of the classification[2]. For example, if samples are classified by the time of appearance, this principle must be constantly observed. In addition, the size of the members of the classification must be equal to the size of the class being classified, which ensures the completeness of the classification and guarantees that no object remains outside the classification. Members of the classification must exclude each other, which prevents objects

from belonging to two or more classes simultaneously. The division into subclasses should be continuous, which is important in hierarchical classification, and each level should be carried out in a logical sequence.

The first scientific studies on the classification of samples began in the second half of the 20th century. I. Kertes distinguished the types of samples for comparative study: representative samples and comparative samples[3]. Representative samples are samples that are part of the whole and embody all the features of the whole that are important for research. Comparative samples are divided into groups of standard samples and identification samples.

In his early works, V.A. Zhbankov proposed classifying samples according to three criteria: the nature of the reflection of features on the object under study, the conditions and time of the appearance of samples, and the type of forensic examination[4]. Orlov classified samples according to the nature of the occurring phenomenon into experimental samples, free samples, and natural samples[5].

Among modern classification approaches, the classification of A.M. Zinin occupies a special place. He emphasizes that the division into free, conditionally-free, and experimental samples is carried out depending on the time and conditions of their appearance[6]. In its classification, free samples are considered as samples obtained before and without connection with the initiation of a criminal case, conditionally free samples are considered as a type of free samples, and experimental samples are considered samples obtained under special conditions.

In the classification given by E.R. Rossinskaya and E.I. Galyashina, samples are divided into groups according to the characteristics of the features: samples representing the features of another object and samples representing their own features[7]. Depending on the time and conditions of occurrence, they are divided into free samples, experimental samples, and conditionally free samples.

One of the most complete classifications is given by N. I. Dolzhenko, who classifies samples according to seven bases[8]. Based on the time and conditions of occurrence, they are divided into free, conditionally free, and experimental types, and based on the nature of the characteristics of the object of research, they are divided into types that reflect individual characteristics of the object and those that reflect characteristics of a species or group. According to the nature of the samples, they are divided into traces, products of human or animal activity, isolated parts of objects, representatives of groups of objects, and average samples. Samples are divided into those taken by the investigator, specialist, and expert, and those taken from the victim, witness, suspect, and accused, depending on the procedural status of the persons from whom the samples are taken. By types of examination, they are classified as samples taken for traditional forensic examinations, forensic medical examinations, and materials science examinations, and for cases taken - as samples taken voluntarily and forcibly.

As a result of comparing the classifications of different scientists, it is possible to distinguish common and different aspects. Almost all scientists divide samples by time of appearance into free, conditionally-free, and experimental types, most authors accept the nature of the reflection of features of samples as the basis for classification, and classification by types of expertise is also widespread. Among the differences, it is noticeable that the status of sample-standards and collection samples is assessed differently. V.Ya. Koldin does not

consider standards as samples for comparative research[9], while V.M. Pleskachevsky emphasizes that the collection of natural samples occupies a special place as sources of information[10]. The number of classification bases and their content vary, some scientists classify based on one or two bases, while others create complex systems with multiple bases. There are also differences in terminology, for example, the terms experimental or special samples are used differently.

Analyzing the existing classifications, it is possible to propose a comprehensive system. By origin, they are divided into free, conditionally free, and experimental samples, and by nature into biological, physicochemical, morphological, functional, and digital samples. According to the method of obtaining, samples are divided into voluntary, mandatory, and mixed, and according to the type of examination - samples taken for forensic, forensic medical, commodity science, economic, and environmental examinations. By shelf life, they are divided into long-term, medium-term, short-term, and disposable samples, by legal significance into main, additional, and control samples, and by quantitative indicators into macro-samples, micro-samples, and ultramicro-samples.

In the 21st century, the development of technologies is introducing new approaches to classification. In particular, digital samples are being separated into a separate type, which is associated with the development of computer technologies and digital forensics[11]. The distinctive features of digital samples are their storage in electronic form, ease of copying, high risk of modification, and analysis using special software.

The problem of sample classification for comparative research is multifaceted and complex. The classifications proposed by various scientists complement and develop each other. The optimal classification system should take into account all important features, follow logical rules, be convenient for practical use, and be able to introduce new sample types. The emergence of new sample types in modern conditions indicates the need for further improvement of the classification system. In particular, the widespread use of digital technologies requires a review of traditional classifications.

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