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ALGORITHM FOR THE FORMATION OF PRICE LISTS FOR RAW AMBER TAKING INTO ACCOUNT INDIVIDUAL CONSUMER CHARACTERISTICS

Purpose. Development of an algorithm for the formation of price-lists for raw amber, taking into account its individual consumer characteristics, which is based on the principle of inheritance of properties.

Methodology. In the course of the study, general scientific and special research methods were used: analytical, dialectical, comparative-evaluative, gemmological-economic, comparative-legal, systemic-structural. The main part of the work is based on the practical results of previous studies and expert assessments.

Findings. A critical analysis of modern gemmological terminology, which is used in the geological, mineralogical and expert-evaluative study on the individual characteristics of raw amber samples, is carried out, and its content has a direct impact on its further pricing. The specifics of the relationship between the raw, appraisal and consumer amber markets, the subjective features of the gemmological interests of the manufacturer (seller), expert (appraiser) and consumer (buyer) are disclosed. The authors' method of establishing the relationship of individual consumer characteristics between raw materials and products is proposed, which is based on the principle of inheritance of decorative, geometric and weight characteristics of raw amber. The concept of "individual consumer characteristics of amber" is formulated.

Originality. An algorithm for the formation of price-lists for raw amber has been developed, taking into account the individual consumer characteristics of samples, which is based on the principle of inheritance of amber properties formulated by the authors, according to which its natural decorative characteristics are related to direct criteria for evaluating amber, whereas the transformable geometric and weight characteristics of samples are indirect.

Practical value. The practical significance of the results obtained lies in the fact that they can be used in research and educational activities by scientists and applicants of higher education, business and financial-and-economic activities of subjects of gemmological relations, law-making and law enforcement activities of public authorities in the process of improving national legislation.

Keywords: *raw amber, price-list, price, formation algorithm, individual consumer characteristics*

Introduction. In world practice, price lists for raw amber are formed taking into account market realities by mining organizations that conduct their business activities at specific deposits. In countries with hard state regulation of the economy, they are approved by authorized state authorities. The mining and geological conditions of the amber deposit, as well as the methods, techniques and technologies for its development and mining, affect the cost of production and subsequent income. Then the obtained cost indicators are systematized in the form of tables-price lists for each type of raw material, depending on the needs of the market.

In Ukraine, this process is devoid of market orientation, since the powers of expert evaluation of precious stones, precious stones of organogenic formation and semi-precious stones (hereinafter – gems), in accordance with Part 4 of Article 15 of the Law of Ukraine "On State Regulation of Mining, Production and Use of Precious Metals and Precious Stones and Control over Operations with Them" were granted to the State Gemmological Centre of Ukraine (SGCU) [1]. This subject is a scientific budgetary institution belonging to the sphere of management of the Ministry of Finance of Ukraine, which is not engaged in either the extraction of amber or the processes of its further technological processing.

At the same time, in accordance with the Regulations on the SGCU [2], one of its activities is scientific and scientific-technical expertise, including diagnostics, and estimation of the forecast value of gems in the form of raw materials and finished products. Summarizing information about the dynamics of price indicators for gems in raw materials and products, SGCU issues a quarterly information and reference publication – the bulletin "Price Guide for Precious and Decorative Stones". It is based on price analysis, as a rule, on the

European market, which, certainly, does not reflect the specifics of domestic amber deposits. Existing SGCU price lists are justifiably criticized not only in terms of their specific objectivity, but also regarding their general expediency. In addition, it should be borne in mind that the content of the concepts "estimation of the forecast value of gems" and "preparation of a price list for gems" are not identical, including as powers.

The problem is also complicated by the fact that amber mining on the territory of Ukraine continues to be carried out illegally, and, consequently, the formation of a legal framework in the field of pricing for raw amber and creation of regulatory price lists are outside the interests of black business. During online auctions for the sale of raw amber on the "Prozorro. Sales" platform, which is a state enterprise, owned and operated by the Ministry of Economy of Ukraine, some values of the starting auction price are also perceived ambiguously.

It should also be noted that the commission of illegal extraction, sale, acquisition, transfer, shipment, transportation, processing of amber in significant amounts constitutes a qualified crime in accordance with Part 2 of Article 240-1 of the Criminal Code of Ukraine. Under the specified "significant amount", the cost of amber should be understood, which is a hundred or more times higher than the tax-free minimum income of citizens. That is, the estimation of amber value in this case also plays an important role, since amber in raw, unprocessed and processed form belongs to the group of precious stones of organogenic formation – minerals of national importance.

Conducting such an estimation, based on the principles of objectivity and completeness of research, is entrusted to the subjects of gemmological forensic examination. At the same time, the independence of a forensic expert and the correctness of his opinion is ensured, among other things, by criminal liability for giving a knowingly false opinion [3, Article 4].

Literature review. Currently, in Ukraine, the expert evaluation activities of the amber market are regulated by two main sources, whose legitimacy seems to be ambiguous.

Firstly, we are talking about the National Standard of Ukraine “Amber in raw material. General technical specifications. DSTU 8847:2019” [4, 5]; as already noted above, the price list for amber, formed by the SGCU in the bulletin “Price Guide for Precious and Decorative Stones” [6].

The first document is purely technical in nature and defines the rules for delivery and acceptance, methods of control, methods of transportation, storage and operation of raw amber. Moreover, in connection with the reform of the legislation of Ukraine on standardization [7], such terms as “world standards”, “state standard”, “technical conditions” in the gemmological legislation were either replaced by the terms “indicator”, “current legislation” or excluded altogether. Thus, a situation has arisen in accordance with which the specified standard was adopted on 04.17.2019 and came into force on 07.01.2020, and the law on “destandardization” was adopted on 09.20.2019 and entered into force on 10.16.2020. That is, the current law on precious stones [1] does not provide for the existence of any standards in this area.

The second source is the SGCU price list, which is directly related to the expert evaluation of raw amber. The main disadvantage of this price list, from our point of view, is the lack of connection with mining organizations and binding to specific Ukrainian deposits. It should also be noted that in accordance with the decree of the government of Ukraine, the SGCU is responsible for the preparation and publication of periodic reference books of wholesale prices for diamonds, precious, semi-precious and decorative stones [8]. It is obvious that the concepts of “compiling a price list for gems” and “preparing a guide to wholesale prices for gems” are not equivalent.

In addition, this price list is replete with terminology that has a double meaning or is specifically disclosed, which is completely unacceptable when conducting an expert assessment.

For example, “individual characteristic (of amber)” refers to an indicator that characterizes a certain quantitative parameter or qualitative property of amber [5]. At the same time, the main content of the term is given in the note, in which the indicators characterizing the quantitative parameters of amber are the mass and size of amber pieces, the number of cracks, the content of organic (inorganic) inclusions in amber pieces, etc., qualitative properties are texture, colour, shape, transparency of amber pieces, and others.

From our point of view, it seems appropriate to operate with the concept of “individual consumer characteristics of amber”, which is proposed to be understood as a set of variable (acquired) and unchanged (inherited), quantitative and qualitative (geometric, decorative, consumer) parameters that characterize the corresponding properties of amber in raw materials, raw and processed form (products), and their expert evaluation allows you to calculate the price of raw amber and predict the cost of the proposed product.

At one time, the calculation of the price lists of the GGCU was carried out precisely by calculation, based on the real indicators of the “good yield” in the production of amber parts for jewellery. Now, the socio-cultural significance of gemstones is added to this, as it is revealed in the traditions of its use. The traditions of use, in turn, form an idea of gems value [9].

Specialists representing the International Amber Association (Poland) also note that among natural ambers, the most valuable are those in which craftsmen manage to reveal their unique beauty of colour and at the same time preserve the similarity of the natural form of samples [10].

At the same time, it is clear that amber pricing is also influenced by other factors, such as the ratio of supply and demand, which ultimately depends on the strategy of behaviour in the market of leading companies in the extraction and processing of amber [11].

Earlier, the authors published the results of the development of a method for determining the cost of individual amber samples, the essence of which is the sequential fixation of the gemmological and consumer properties of the sample, followed by their transformation into an alphanumeric code, the total value of which forms an individual indicator of the sample (a set of individual qualities of the sample), located in correlation with its cost [12].

Unsolved aspects of the problem. The foregoing confirms the position according to which the examination of the individual consumer characteristics of amber is one of the urgent and acute problems of evaluation and expert activities in Ukraine. The lack of recognized approaches to determining prices in the context of a variety of characteristics of specific samples necessitates the development of alternative price lists for raw amber, based on market relations between all participants in the amber market.

Research methodology. To achieve this goal, this article provides for the implementation of such tasks:

- analysis of the existing mechanism for the formation of price lists for raw amber;
- development of an algorithm for the formation of price lists for raw amber, taking into account individual consumer characteristics;
- determination of the composition and sequence of actions for compiling price lists for raw amber.

The sequence of this study is determined by the logic of setting the above tasks, the structure and content of the prescriptions of the current gemmological, financial and forensic legislation, as well as the practice of its application.

Results. *Analysis of modern gemmological terminology.* The use of certain terms and concepts in the geological, mineralogical and expert-evaluative study on the individual characteristics of raw amber samples, whose content has a direct impact on its further pricing, from our point of view, seems debatable, and in some cases – unreasonable and even erroneous. Here is an example of some of the most significant of them.

Massive texture – the main and constantly repeating term in the price lists. Two different concepts are embedded in this term, that is, “massive” is heavy, “texture” is a pattern that can be uniform, spotty, landscape. The term “massive rock” is predominantly a geological one, which is used by geologists in the field (primary) description of dense, heavy rocks. Therefore, using the term “massive texture” for the lightest gemstone – amber – is at least wrong.

Volumetric form. From the point of view of geometry, any sample of amber has a three-dimensional shape (length, width and height). Therefore, this term is not logical at all as an evaluation criterion. There is such a generally accepted concept as the aspect ratio. For example, 1 : 1 : 3 is an elongated shape, 1 : 2 : 0.2 is a flat shape, 1 : 1 : 1 is an isometric shape.

Smooth surface – for a gemmologist, this term is incomprehensible, since such a surface does not exist in unprocessed amber, it can only be created by technological means. As a rule, natural (unprocessed) samples of amber have a smooth, rough, pitted, cavernous surface, etc.

Oxidation surface. Practice shows that Ukrainian amber is divided into two groups:

- samples with a crust up to 3 mm of disintegrated (destroyed) amber;
- samples with a thin film of oxidation.

They differ both in composition and in nature. In addition, each group has a different influence on the results of the examination. In the presence of a crust, the examination of amber without changing its presentation is practically impossible, while the oxidation film makes it possible to carry out an examination in the first approximation. At least you can determine the transparency, the presence of inclusions.

Colour and transparency – sometimes they have a completely meaningless wording – “any colour”, “from transparent to opaque”. Although both colour and transparency are

price-forming characteristics for amber and affect the cost of products.

As an example, let us look at Fig. 1, which shows how the colour of amber affects the cost of the beads. Products of milky white and honey colour have the highest value. The cost of beads with lemon, cognac and black-grey colour is much lower (by an order of magnitude).

The same regularity in value is preserved for other products: mini sculptures, cameos, and others. Therefore, ignoring such properties as colour, transparency generally raises a question of the appropriateness of such price lists.

Inclusion – this characteristic of the sample has been also undeservedly overlooked and, first of all, faunal inclusions remained unnoticed. Although they are known to sharply, several times increase the value of amber.

As an example, we can cite the price lists of free-selling prices for amber raw materials of large enterprises dealing with the extraction of Baltic amber, whose formation is based on properties that allow one to make only a predictive assessment of the quality of amber. At the same time, its characteristics such as shape, transparency, colour, inclusions are used, but without any specification of them. For example, inclusions – without division into ordinary, rare, unique. The colour scheme of amber is also not taken into account.

Table 1 presents the properties from the price lists (the left column) and consumer characteristics (the right column). In the left column, there are properties that, as shown above, do not have clear definitions, i.e. it is almost impossible to determine the quality of amber using these properties. In the right column, there are consumer properties with specific characteristics (colour, clarity, inclusions, inclusions). They, as shown above, are price-forming and only thanks to them, the amber market should and can exist.

In this regard, let us consider how transactions actually take place in the market of amber raw materials and how products are evaluated.

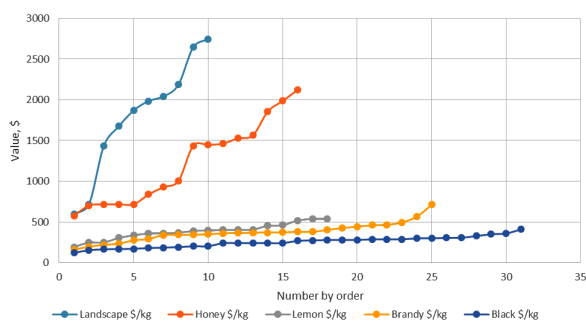


Fig. 1. The cost of beads-balls depending on the colour

Table 1

Comparative characteristics of raw amber and in products

Characteristics of raw amber in SGCU price lists	Consumer characteristics
<ul style="list-style-type: none"> - weight from 2 to 1000 g and above. - texture (massive) and cracks (through), their combinations; - shape: voluminous, flattened; - colour is not determined; - transparency is not defined; - surface: depressions and tubercle - degree of oxidation; - inorganic inclusions, their content 	<ul style="list-style-type: none"> - colour: white, honey, lemon, cognac, black; - purity: transparent, translucent, opaque; - polishing: mirror, good, bad; - occlusions: single, up to 50 %, over 50 %; - inclusions: ordinary, rare, unique; - shape: ball (isometric), cabochon (flat), artistic, exotic (drop)

Raw materials with specific characteristics are transformed into specific products as a result of a production process that includes the following elements: design development; drawing up technological maps; direct manufacturing process. However, according to price lists it is almost impossible to obtain reliable information about the quality of raw amber; therefore, this task is solved by the dealer (a buyer of raw amber, an amber processing specialist). Thanks to his experience and knowledge, they can reveal not only the qualitative characteristics of raw amber, but also the scope, as well as its cost. If the quality of raw materials and the cost suits them, they make a decision to purchase them. Otherwise, they either bargain or refuse to trade. Thus, it turns out that the existing price lists have no practical value as such.

At the end of the market chain, there is the product and its buyer (end consumer), who, as a rule, does not have special knowledge about amber. They apply the principle of a simple choice “like – dislike”, “beautiful – not beautiful”. Intuitively, the buyer of the product primarily perceives the aesthetic component, i.e. colour scale, shades, transparency, quality of processing (polishing), inorganic and faunal inclusions. If the buyer is satisfied with the price and quality, he/she buys the selected product, which, in fact, confirms the existence of the market. Otherwise (if the price seems too high and the quality unsatisfactory), the buyer refuses to buy, the market stops and its interconnections are violated.

Another subject of relations in the amber market is an expert gemmologist. The current practice of gemmological expertise shows that such a specialist can only be a person who has the appropriate theoretical background, special knowledge of the amber market and practical experience in its processing. Otherwise, the expert’s conclusions are likely to be unobjective and/or incomplete.

The objectivity of an expert assessment can be achieved due to the availability of ideas about the regular relationship between raw materials and products, between the decorative properties of raw amber and consumer properties of products. Only in this case it will become clear that the high cost, for example, of royal beads-balls is due to the rarity and high demand for raw amber of milky white colour (landscape).

The approach proposed by the authors to identify the regular relationship between raw materials and products is based on the principle of inheritance of decorative, weight and geometric characteristics of raw amber.

The decorative characteristics of amber (colour, transparency, occlusions, inclusions, the ability to accept polishing) do not affect the technological process in the manufacture of products. This is an aesthetic component that affects the appearance of products and is taken into account in the artistic design of products. Therefore, decorative characteristics are transferred to products practically without changes (Table 2). An exception may be inclusions of foreign objects that got into amber during its formation – tree branches and bark, air bubbles, dust, and other inorganic objects. In the manufacture of products, they try to get rid of them, although for science they may be of particular interest – then such samples fall into museum or scientific collections.

The weight and geometric properties (shape, size) of raw amber as a result of the manufacture of products decrease depending on the type of products. For example, in the manufacture of balls, the yield is, on average, 30 % (the loss of raw materials is 70 %), for cabochons – 40 %, for medical beads – 80–90 %. These values will be observed if the shape of the raw material is close to the shape of the product, i.e. for the manufacture of balls, an isometric shape is preferred, for cabochons, cameos, intaglios – a flat one.

Variable parameters, depending on the complexity of the technological process, directly fall on the economic component of the products. Sometimes the cost of the technological process is decisive. For example, in the manufacture of art products, the cost of the technological process reaches 80 % of

Evolutionary scheme of individual consumer characteristics of amber

Category of characteristics	Characteristics of raw amber	Characteristics used in the processing	Characteristics of amber in products
Invariable	Decorative: - colour - transparency - inorganic inclusions - faunal inclusions - polishability	—	Consumer: - colour - transparency - inorganic inclusions - faunal inclusions - polishing quality
Changeable	Geometric: - form - size Weight	Geometric: - form - size Weight	Geometric: - form - size Weight

the cost of the product. At the same time, the cost of work in the manufacture of medical beads is only 20 %. Consequently, the shape, size, weight of products in some cases indirectly depend on the geometric parameters of raw amber, in others they completely inherit them.

In addition, here it is necessary to take into account that the loss of conditioned raw amber in the manufacture of products goes into the category of industrial raw materials, i. e., in fact, this is a fine fraction, which is usually used for the manufacture of varnishes, rosin, succinic acid. Therefore, when processing amber, and especially on an industrial scale, this factor must be included in economic calculations.

From the foregoing, it follows that decorative characteristics are direct criteria for assessing the quality of amber, both in raw materials and in products. Weight and geometric characteristics, as mentioned above, vary to a different extent depending on the type of products, but in any case, they determine the type of products, and therefore, the shape, weight, and size of products are indirectly dependent on similar parameters of the original sample.

As a result of the transformation of raw materials into a product, decorative, geometric and weight parameters are transformed into consumer characteristics.

The term “consumer characteristics” refers to the set of characteristics that distinguish one product from another. In fact, these are the criteria that determine the quality of amber both in the product and in raw materials, as well as the cost of amber in products.

Using this pattern, it is possible to determine the cost of raw amber for the manufacture of ball beads with various decorative properties of amber. Just as in [9], the assessment was carried out by calculation, taking into account the “good yield” in the production of jewellery from amber.

In the presented study, the calculation of the cost of raw materials, taking into account consumer properties, was car-

ried out using the Amber1 software product developed by the authors based on C# Visual Studio [13].

Approbation of the obtained results can be demonstrated by the following examples. Before making ball beads from lemon, milky white and honey amber, we make calculations according to the above formula and draw up cost graphs for raw amber, taking into account SGCU price lists.

In Fig. 2, the estimated cost of raw lemon amber divides the price list charts into three areas:

- *area 1* – the calculated data coincide with the data of the price lists in the range of 93–540 \$/kg. These prices suit the buyer quite well, but there is no information about the availability and quality of lemon-coloured amber;

- *area 2* – with a reduced cost from 10 to 193 \$/kg. Price lists and weight fractions also suit the buyer. But, the characteristics of the desired raw amber are also unknown here;

- *area 3* – with overestimated cost indicators. In any case, this area is not interesting from a commercial point of view in any case of properties, because the cost of raw materials is obviously high.

In Fig. 3, the estimated cost of milky white amber fits into a wider price range of 598–2745 \$/kg. But it is not known from the price lists how much milky white amber is in this price range.

An area with an underestimated price of amber, as well as with an overestimated one, will not be of interest to the buyer, because there is no information about the quality of raw materials. And even more so if the buyer faces a specific task – to purchase milky white amber, whose cost can vary from 598 to 2745 \$/kg.

As follows from the above, it is practically impossible to determine the quality of raw materials, the scope of application, and, therefore, their cost using SGCU price lists. Therefore, it is not possible to apply these price lists in the expert evaluation of amber, because observance of such basic principles of forensic examination as objectivity and completeness of research is not guaranteed [3, Article 4].

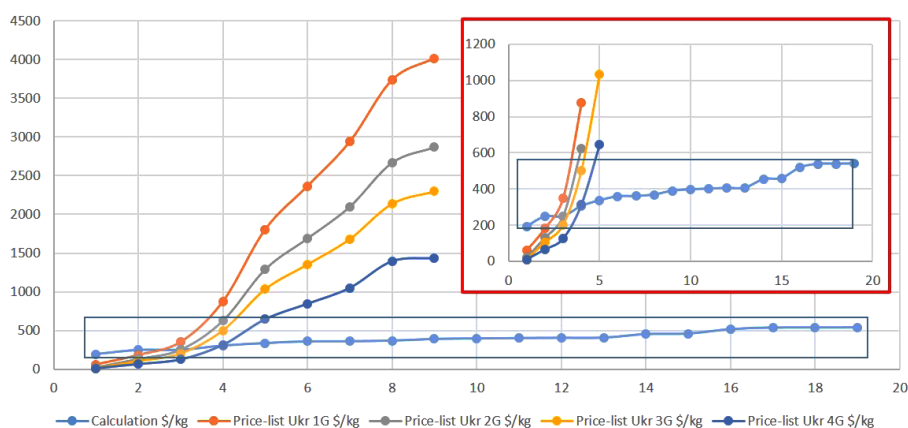


Fig. 2. Cost of raw lemon amber according to price lists and calculated data

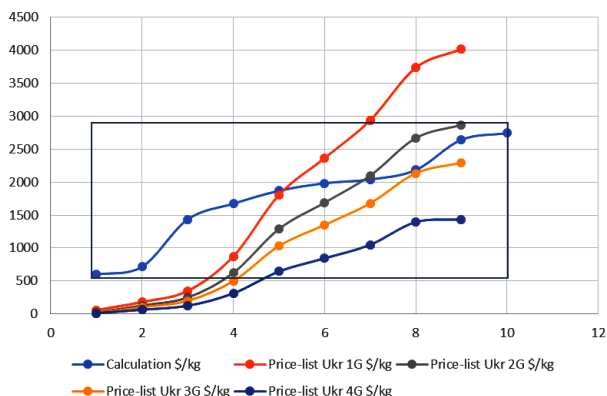


Fig. 3. The cost of milky white and honey raw amber according to price lists and calculated data

This problem can be fully solved by the results of calculations, where an inherited relationship is traced between the decorative properties of raw amber and consumer characteristics of products. Solving the inverse problem, the cost of raw materials from which this type of product was made is determined. This makes it possible to draw up price tables (price lists).

As an example, we will give price lists for milky-white (landscape) amber, compiled according to the Internet [14, 15] and [16, 17] for the manufacture of bead-balls from the corresponding decorative variety of amber (Table 3).

The proposed price list, due to the small amount of data obtained, does not claim to be an acceptable objectivity of the results, but the main task of the study should still be recognized as achieved, since an algorithm has been obtained for the formation of price lists for raw amber, taking into account individual consumer characteristics, which includes three stages:

1. Information-search stage. Choosing a source of information (Internet, exhibitions, shops, boutiques), where you can get data on amber products: name, shape, size, weight, colour, transparency, presence of occlusions and inclusion, polishing, cost.

2. Settlement and evaluation stage. Determination of the cost of raw amber from which this product is made. The calculation of the cost of raw amber is carried out taking into account the market value of products, the cost of producing a

particular product and the yield of products suitable for manufacturing.

In this case, the “Amber 1” software developed by the authors was used for the solution, which greatly facilitates this task. Here it is enough to enter the cost of the product and its mass in the corresponding table. As a result, we obtain data on the cost of raw materials. All information about the calculations performed is recorded on the “Statistics” panel.

3. Control and systematizing stage. The creation of a data bank allows you to create price lists for raw amber for a specific type of product, taking into account the cost, size-weight fractions and grade (individual quality characteristics) with the possibility of transparent control and market editing.

Conclusions and prospects for further research. The conducted studies on individual consumer characteristics of raw amber samples in order to develop an algorithm for the formation of the corresponding price lists gave grounds for subsequent generalizations.

1. The analysis of the existing mechanism for the formation of price lists for raw amber in the system of the Ministry of Finance of Ukraine, which ensures the formation and implementation of state policy in the field of mining, production, use and storage of precious stones, was carried out. It has been established that the absence in the current approach of the main individual pricing properties (colour, transparency, presence of inorganic inclusions, faunal inclusions, polishability) does not allow an objective and complete expert assessment of a specific sample of raw amber.

2. An algorithm for the formation of price lists for raw amber has been developed, taking into account individual consumer characteristics. Such an approach to establishing a regular relationship between raw materials and products is based on the principle of inheritance of the decorative, weight and geometric characteristics of amber, which makes it possible to differentiate direct and indirect criteria for assessing its quality and cost.

3. The authors’ principle of inheritance of the properties of amber is formulated, which consists in the fact that the individual decorative properties of amber (colour, transparency, inorganic inclusions, faunal inclusions, the ability to accept polishing) are transferred to products almost without changes. At the same time, the individual weight and geometric characteristics of the samples (shape, size) vary to a different extent depending on the type of product, but at the same time, they determine the type of product. The latter gives reason to assert that the weight, shape and size of products are indirectly dependent on the individual weight and geometric parameters of the original sample.

4. A sequence of compiling price lists for raw amber is proposed, which includes the following actions: a) collection of data on individual consumer characteristics by types of amber products; b) determination of the cost of amber raw materials, taking into account its consumer properties; c) analysis of the data obtained and the formation of normative-practical and/or reference publications containing a systematic list of samples of raw amber with prices and brief individual consumer characteristics.

Promising in the direction of further research on the chosen topic are the analysis and development of the legal foundations for the mechanism for the formation of alternative price lists, as well as the identification of regular relationships between mining, processing and trading entities in pricing-formation relations.

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2. Order of the Ministry of Finance of Ukraine, 2004, July 19, No. 465

Table 3

Price list for raw amber for landscape amber beads, \$/kg

Weight, gram**	Grade*		
	I	II	III
> 15	2745	2550	2352
6–15	2151	1954	1764
2–6	1569	1368	1170
0.5–2	968	759	598

Note: * grade is based on consumer properties:

I. The shape is isometric or plate (if the thickness allows you to enter the diameter of the ball), the absence of faunal inclusions, inorganic inclusions, cracks, the ability of the material to take a mirror polish.

II. Isometric shape or plates (if the thickness allows you to enter the diameter of the ball), single inorganic inclusions, without faunal inclusions and cracks, the ability of the material to take a mirror polish.

III. Isometric shape or plates (if the thickness allows you to enter the diameter of the ball), inorganic inclusions up to 50 %, without faunal inclusions, single surface cracks, the ability of the material to take a good polish.

** weight groups of raw materials were created by calculation. For example, to make a bead with a size of 10 mm, weighing 0.5 g, raw amber of an isometric shape is needed, weighing 1.5 g

(as amended by the Order of the Ministry of Finance of Ukraine, 2012, July 16, No. 837) Regulations on the State Gemmological Centre of Ukraine (New edition). Identification number 21587162. Retrieved from <http://www.gems.org.ua/alldoc/pol2012>.

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Алгоритм формування преїскурантів на бурштин-сирець з урахуванням індивідуальних споживчих характеристик

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Мета. Розробка алгоритму формування преїскурантів на бурштин-сирець з урахуванням його індивідуальних споживчих характеристик, в основу якого покладено принцип спадкування властивостей.

Методика. У ході дослідження використовувалися загальнонаукові та спеціальні методи дослідження: аналітичний, діалектичний, порівняльно-оціночний, гемолого-економічний, порівняльно-правовий, системно-структурний. Основна частина роботи базується на практичних результатах раніше виконаних досліджень та експертних оцінок.

Результати. Проведено критичний аналіз сучасної гемологічної термінології, що вживається при геологічному, мінералогічному та експертно-оціночному вивченні індивідуальних характеристик зразків бурштину-сирцю, а її зміст безпосередньо впливає на подальше його ціноутворення. Розкрита специфіка взаємозв'язку сировинного, оціночного та споживчого бурштинових ринків, суб'єктивні особливості гемологічних інтересів виробника (продавця), експерта (оцінювача) і споживача (покупця). Запропоновано авторський метод встановлення взаємозв'язку індивідуальних споживчих характеристик між сировиною й виробами, в основу якого покладено принцип успадкування декоративних, геометричних і вагових характеристик бурштину-сирцю. Сформульовані поняття «індивідуальні споживчі характеристики бурштину».

Наукова новизна. Розроблено алгоритм формування преїскурантів на бурштин-сирець з урахуванням індивідуальних споживчих характеристик зразків, в основу якого покладено сформульований авторами принцип спадкування властивостей бурштину, згідно з яким його природні декоративні характеристики відносяться до прямих критеріїв оцінки бурштину, а геометричні й вагові характеристики зразків, що трансформуються – до опосередкованих.

Практична значимість. Практичне значення одержаних результатів полягає в тому, що вони можуть бути використані в науково-дослідній і навчальній діяльності вченими та здобувачами вищої освіти, господарській і фінансово-економічній діяльності суб'єктів гемологічних відносин, правотворчій і правозастосовній діяльності органів державної влади у процесі вдосконалення національного законодавства.

Ключові слова: бурштин-сирець, преїскурант, ціна, алгоритм формування, індивідуальні споживчі характеристики

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