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Author's Method of Blonde Care and Coloring Zelenska Beauty Blonde System: A Scientifically Grounded Approach to Preserving the Integrity of the Hair Fiber and Optimizing the Salon Business Model

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Abstract

The proposed methodological guide is a comprehensive work in which the author's care and coloring system for lightened hair, the Zelenska Beauty Blonde System, is subjected to multidimensional scientific justification. The relevance of the topic is established through the analysis of a fundamental conflict in the modern beauty industry: the dominant business logic, oriented toward maximizing visit frequency, stands in opposition to the trichologically justified need to minimize chemical load in order to preserve the structural integrity of the hair fiber. The aim of the study is to provide a holistic description and empirical validation of the Zelenska method as an alternative paradigm that reconciles the commercial efficiency of the salon with the long-term health of the client's hair. Methodologically, the work relies on a systematic review of the literature in cosmetic chemistry and trichology, a content-analytical examination of industry reports on the hairdressing services market, and an in-depth case study of the system itself involving comparative analysis of business models. The obtained results indicate that practices of long-term coloring, the extension of intervals between lightening procedures to 3–6 months, a proactive plan of maintenance visits, and the rethinking of the stylist's role as a master-mentor substantially reduce cumulative damage to the keratin matrix of the hair. The economic analysis demonstrates the stable superiority of the model that shifts the focus from short-term visit frequency to client retention: due to the increase in client lifetime value, higher long-term profitability and salon resilience are achieved. In conclusion, it is inferred that the Zelenska Beauty Blonde System represents a scientifically substantiated, economically feasible, and client-centered approach with a pronounced potential for scalable implementation in practice. The information presented in this work will be of interest to practicing hairdressers-colorists, salon owners, cosmetic brand technologists, and researchers in the field of trichology.

Keywords: Hair Lightening, Keratin Damage, Hair Porosity, Blonde Care, Client Retention Model, Trichology, Cosmetic Chemistry, Salon Business Model, Long-Term Coloring, Client Education.

INTRODUCTION

The haircare and hairdressing services industry is one of the most dynamic and economically significant segments of the global beauty economy. According to analytical reviews, the global market for hair coloring products in 2024 is estimated at 25–30 billion USD; the projected compound annual growth rate is 5.5–8.8% over the horizon to 2029–2033 [1]. The market for salon services is even larger: in 2024 it exceeded 247 billion USD, with haircare procedures accounting for more than 77% of this revenue [4]. Growth is supported by rising disposable incomes, the pursuit of self-expression through transformation of appearance, the influence of fashion trends, and the need to mask gray hair [2, 3].

The economic architecture of most salons is built around a model oriented toward maximizing frequency of visits (FOV). The typical interval between appointments for color services is 4–8 weeks, which creates a stable and predictable cash flow [5, 7]. Such a configuration creates a direct incentive for stylists to push clients toward regular color refreshes, especially in cases of lightening, where the regrown root zone rapidly makes a correction necessary.

However, this logic contradicts scientifically grounded principles of maintaining hair health. Intensive chemical interventions, primarily lightening, cause progressive, cumulative damage to the hair fiber [6, 10]. Each subsequent lightening cycle deepens the degradation of the protective

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cuticle, increases cortical porosity, and irreversibly reduces the mechanical strength of the keratin structure [8, 10]. Scientific data and professional practice therefore dictate the necessity of observing sufficient restorative intervals between procedures to minimize harm [17, 20].

A fundamental scientific and practical conflict is formed: a confrontation between economic rationality (increased frequency of visits) and trichological necessity (prolonged recovery periods). This gap acts as an inherent defect of the dominant business model in the industry, because its key source of revenue — the intensity of procedures — is simultaneously the main trigger of the adverse effect, namely hair damage. A self-sustaining vicious circle emerges: in striving to maintain an impeccable appearance, the client is forced to resort more frequently to procedures that degrade hair quality, which leads to dissatisfaction, additional expenditures on restorative care, and ultimately to a high level of client churn.

The aim of the study is to scientifically substantiate and systematically present the proprietary methodology Zelenska Beauty Blonde System as an alternative paradigm that resolves the contradiction between the commercial performance of the salon and the long-term health of the client's hair.

The scientific novelty lies in the integration of principles of trichology, customer relationship management economics, and pedagogy into a single methodologically coherent system of care for lightened hair.

The author's hypothesis is that application of the Zelenska Beauty Blonde System methodology, based on extending intervals between lightening sessions, personalized care, and client education, makes it possible not only to preserve the structural integrity of the hair fiber, but also to form a more sustainable and profitable salon business model through a significant increase in the client retention rate.

CHAPTER 1. BIOCHEMICAL MECHANISMS OF HAIR FIBER DAMAGE DURING BLEACHING AND THE SCIENTIFIC RATIONALE BEHIND STRATEGIES FOR ITS MINIMIZATION

In Chapter 1, the biochemical mechanism of hair fiber damage during the lightening process is analyzed, beginning with disruption of the cuticular barrier under the action of alkali and the loss of the protective lipid layer 18-MEA, which opens access for the oxidizing agent to the cortex. A key stage of degradation will be examined: the irreversible oxidation of keratin disulfide bonds with the formation of cysteic acid, which leads to the rupture of structural cross-links and the subsequent loss of protein mass. Following the description of the mechanism, its macroscopic consequences will be

investigated: cumulative reduction of mechanical strength and a significant increase in porosity, provoking dryness and hygroscopic fatigue. A scientific rationale is presented for strategies to minimize this irreversible damage, which is based not on the repair of the damaged structure, but on compensatory care and, critically, on the observance of prolonged intervals between procedures to allow the growth of new, undamaged hair fiber.

Degradation of the Keratin Matrix: From Cuticle to Cortex

The hair bleaching procedure is an intensive chemical treatment aimed at the disruption of the natural pigment melanin, which simultaneously and inevitably affects the protein backbone of the fiber, keratin. The damage unfolds as a cascade of interconnected stages and involves all structural levels of the hair fiber.

Disruption of the cuticular layer: The initial step is exposure to an alkaline component (most commonly ammonia or its derivatives) with a high pH, which induces fiber swelling and loosening/lifting of the cuticle scales, the outer barrier layer [19]. This allows diffusion of the oxidizing agent into the cortex, the region where melanin granules are located. In parallel, the covalently bound monomolecular lipid layer of 18-methyleicosanoic acid (18-MEA), which determines the hydrophobicity and smoothness of the hair surface, is removed from the cuticle. Loss of 18-MEA renders the surface hydrophilic, more sensitive to moisture, and prone to tangling [10, 22].

Oxidative destruction in the cortex: After passing through the cuticle, the oxidizing agent, typically hydrogen peroxide (H_2O_2) , initiates melanin breakdown but acts nonselectively, simultaneously damaging keratin proteins of the cortical matrix [9, 24]. The critical and most destructive reaction is the irreversible oxidation of disulfide bonds (-S-S-) in cystine residues, which provide mechanical strength and elasticity to keratin. Conversion of these bonds into cysteic acid (-SO₃H) leads to cleavage of the cross-links between polypeptide chains [11, 12].

Loss of protein mass: Weakening and fragmentation of bonds within the keratin matrix result in leaching of low-molecular-weight protein fractions, primarily keratin-associated proteins (KAPs), especially during subsequent aqueous treatments. It has been demonstrated that the magnitude of protein loss increases with bleaching intensity and directly reflects the extent of structural compromise of the fiber [21, 23].

The dynamics of this complex degradation process are schematically illustrated in Fig. 1.

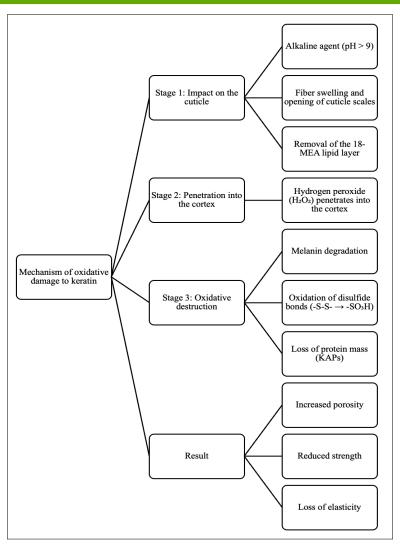


Fig.1. Scheme of the mechanism of oxidative damage to keratin during lightening (compiled by the author based on [10, 13, 22]).

During hair lightening, a highly alkaline environment (most often ammonia) first loosens and lifts the cuticle scales, stripping the surface of the protective lipid layer of 18methyleicosanoic acid (18-MEA), which makes the hair more hydrophilic, rough, and prone to tangling; through the disrupted cuticle, hydrogen peroxide diffuses into the cortical layer, where it not only degrades melanin but also nonspecifically oxidizes the protein matrix, primarily cleaving the disulfide bonds of cystine in keratin with their conversion into cysteic acid, thereby destroying the cross-links that provided tensile strength and elasticity of the fiber; further fragmentation of the keratin network and keratin-associated proteins leads to leaching of low-molecular-weight protein components and progressive loss of mass and mechanical integrity of the hair, and the extent of protein loss directly correlates with the intensity of bleaching and the level of accumulated structural damage.

Consequences of Chemical Stress: Increased Porosity and Decreased Mechanical Strength

Destruction of the keratin matrix is inevitably translated into measurable changes in the physical and mechanical

properties of the hair shaft. Two key integral markers of the degree of damage are porosity and mechanical strength.

Porosity is understood as the ability of hair to sorb and retain moisture. As a result of chemical exposure, the formation of microcracks in the cuticle and voids in the cortex at the sites of leached protein components leads to a substantial increase in porosity [10]. Highly porous hair rapidly absorbs water but loses it just as rapidly, which results in dryness and brittleness. Additionally, such hair is prone to hygroscopic fatigue, that is, cumulative damage during repeated cycles of swelling (during wetting) and shrinkage (during drying), which further weakens its structure [10, 12].

Mechanical strength, primarily the tensile strength limit, serves as a direct indicator of the integrity of the internal architecture of the hair. Experimental data demonstrate a clear inverse correlation: as the number of bleaching cycles increases — and the associated porosity increases — the tensile strength limit decreases progressively. For example, in one study the mean value for virgin hair was 182.4 MPa; after the first bleaching cycle it decreased to 150.1 MPa, and after the third cycle to 121.3 MPa, corresponding to a loss of

strength of more than 33% [14]. This dynamic clearly reflects the cumulative nature of the damage (Fig. 2).

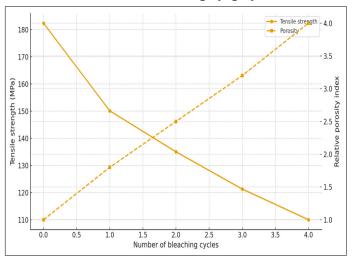


Fig.2. A graphical model of cumulative damage to a hair fiber, demonstrating an inverse correlation between the tensile strength and porosity index depending on the number of lightening cycles (compiled by the author based on [14]).

Chemical stress of the hair leads to progressive structural destruction of the keratin matrix, which is manifested by an increase in porosity and a simultaneous decrease in the mechanical strength of the shaft; the increase in porosity is caused by the formation of microcracks in the cuticle and voids in the cortex due to leaching of protein components, as a result of which the fiber more easily and rapidly takes up water, but loses it just as rapidly, becoming dry, brittle, and prone to hygroscopic fatigue under cyclic swelling and shrinkage, whereas mechanical strength, assessed by tensile strength, shows a pronounced inverse dependence on the degree of porosity and the number of cycles of aggressive treatment: the mean tensile strength decreases from 182.4 MPa in intact hair to 150.1 MPa after the first bleaching cycle and to 121.3 MPa after three cycles, that is, by more than one third, which quantitatively confirms the cumulative nature of fiber damage.

Scientific Rationale for Prolonged Recovery Intervals

Given the irreversible and cumulative nature of structural damage to the hair shaft, the optimal strategy for its limitation is to provide a sufficient resting period between aggressive chemical interventions. Professional consensus indicates a minimally acceptable interval of 4–8 weeks between lightening sessions [18]. During this time, partial restitution of the lipid shielding of the cuticle may occur due to natural sebum, and the risk of overlapping decreases — that is, the repeated application of the lightening formulation to already treated, weakened segments of the shaft, which predictably increases brittleness and leads to hair breakage [33, 35].

It is essential to clearly recognize that a disrupted keratin architecture does not possess the capacity for self-repair. In this context, recovery should be understood not as true repair of defects, but rather as a set of care measures aimed at compensating for lost components (lipids and proteins), sealing the cuticle, and — critically — providing time for the growth from the root of new, intact hair [15, 17]. A direct conclusion follows: the longer the interval between lightening procedures, the higher the proportion of the hair mass represented by healthy, undamaged hairs, and the lower the total accumulated degree of damage. The practice of the Zelenska Beauty Blonde System, which provides for repeated lightening at 3–6 month intervals, is fully consistent with this scientifically grounded, conservative paradigm that prioritizes the long-term health of the hair fiber.

CHAPTER 2. ZELENSKA BEAUTY BLONDE SYSTEM AS A COMPREHENSIVE METHODOLOGY: STRUCTURAL ANALYSIS

Zelenska Beauty Blonde System is not a set of disconnected techniques, but an integral, systematically constructed model that covers the full continuum of client interaction — from in-salon protocols to at-home care regulations. Its structural examination allows us to distinguish four mutually complementary components which, in cooperation, pursue a single objective: long-term, healthy, and aesthetically impeccable blonde.

Coloring Technique: Strategy for Minimizing Chemical Stress

At the foundation of the system lies a proprietary coloring methodology designed to produce a long-wearing result that maintains visual relevance and aesthetics over a period of 6–12 months. This effect is achieved through techniques of soft tonal modulation — blonde stretching and balayage. In contrast to classic root-to-tip highlighting or total bleaching, these approaches generate a smooth, deliberately diffused gradient from the natural root area to the lightened ends.

The key advantage of this solution is the absence of a distinct demarcation line during regrowth. This eliminates the primary factor necessitating frequent corrections (every 4–6 weeks). In other words, the design of the technique itself is initially oriented toward disrupting the cycle of repeated lightening, which constitutes the principal determinant of cumulative hair damage.

Proactive Management of Hair Condition: The Individualized Visit Plan Model

Instead of the traditional reactive model (come back when the roots grow out), a proactive, strictly regulated annual protocol for maintaining hair condition is introduced. This protocol shifts the emphasis from repeated lightening to maintaining the quality of the hair fiber and the stability of the color in the intervals between procedures. A typical annual cycle (Fig. 3) defines the objectives of each visit:

Toning (every 1–1.5 months): application of ammonia-free or demi-permanent formulations to neutralize unwanted

nuances (yellowness, copper tones) and to add shine. These procedures do not affect the natural base and do not damage the hair fiber to a degree comparable to lightening.

Care (every 1.5–2 months): professional in-salon protocols for deep hydration, nourishment, and structural repair of the hair (including the use of keratin, lipids, amino acids).

Haircut (every 2 months): planned removal of split ends to maintain a healthy appearance and prevent further shaft delamination.

Repeat lightening (every 3–6 months): the basic procedure is performed strictly as needed and is primarily limited to the regrown root zone, minimizing the impact on previously lightened sections.

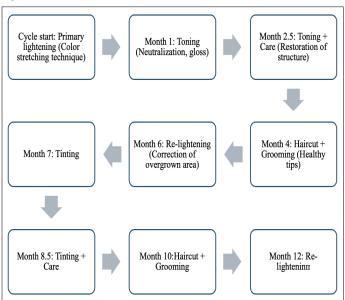


Fig.3. The scheme of the annual customer service cycle according to the Zelenska Beauty Blonde System (copyright data).

Such a structural regulation transforms a salon visit from an emergency intervention into a predictable stage of a long-term program for maintaining the health and aesthetics of the hair.

The Master-Mentor Model: Transformation of the Stylist's Role

One of the key innovations of the system is a radical rethinking of the professional role of the hairdresser: from a service provider to a master-mentor. This position is based on the practices of expert consulting and targeted client education, which fundamentally changes the configuration of their interaction. This logic corresponds to contemporary approaches to client education, where the focus is placed not so much on a one-time service, but rather on the transfer of knowledge and tools that allow the client to independently achieve the desired result [31, 34].

The key elements of the master-mentor model include:

- Personal Hair Care Guide: development of an individualized home care protocol, taking into account hair type, degree of damage, lifestyle characteristics, and available budget.
- Support and adjustment: continuous feedback and adaptation of recommendations as the client's condition changes (for example, pregnancy, stress, change of climate zone).
- Training: conducting styling workshops in which clients learn the correct use of professional tools (hair dryers, stylers) and products that minimize damage and ensure salon-quality results at home.

Table 1 below provides a description of the existing methodological paradigms of care for lightened hair.

Table 1. Comparative analysis of methodological paradigms of care for lightened hair (compiled by the author based on [30, 31, 34]).

Comparison parameter	Traditional model (frequency-oriented)	Zelenska Beauty Blonde System (retention- oriented)
Primary objective	Maximally frequent color correction (maintenance of an ideal root appearance).	Long-term preservation of the structural integrity
Lightening interval	Short (4–8 weeks), dictated by the rate of root regrowth.	Prolonged (3–6 months), dictated by trichological necessity.
Coloring technique	Often total lightening or highlighting from the root, creating a distinct regrowth line.	Blonde extension techniques (balayage, color melting), forming a smooth gradient.
Interim visits	Absent or reactive in nature (for example, emergency toning).	Proactively scheduled (toning, treatments, haircut) to maintain the quality of the hair length.
Role of the stylist	Service executor (responds to the client's request).	Master-mentor (develops and supervises a long-term care plan).
Approach to products	Often monobrand (determined by the salon contract).	Brand agnosticism (determined by scientific analysis of composition and the client's needs).
Role of the client	Passive service recipient.	Active, educated subject, a partner in the care process.

This format of interaction fosters a high level of trust and an authentic partnership. The client ceases to be a passive consumer and becomes an active subject of their own hair care, while the stylist is consolidated in the status of an indispensable expert and advisor, whose professional value extends far beyond the work performed in the salon chair [32, 33].

Principle of Brand Agnosticism: A Scientifically Grounded Approach to Product Selection

In contrast to salons whose assortment policy is determined by contracts with specific cosmetic brands, the Zelenska methodology is initially built on the principle of brand agnosticism. The selection of products for in-salon and athome care is carried out not according to marketing criteria, but on the basis of scientifically justified evaluation of their composition and their suitability for the individual needs of the client.

A specialist competent in cosmetic chemistry analyzes products by their active ingredients, their concentrations, pH value, and other measurable parameters. This approach makes it possible to:

- Maximize personalization of care: Select products that most effectively address the client's specific concerns (for example, porosity, brittleness, dryness).
- Ensure flexibility: Take into account the client's budget, offering both premium and more affordable, yet still effective, alternatives.
- Increase trust: Position the stylist as an objective expert acting solely in the interest of the client.

This principle is consistent with the growing consumer trend toward conscious consumption and attention to product composition rather than the logo on the packaging [16, 27], thereby firmly establishing the stylist not as a salesperson but as a scientific consultant.

CHAPTER 3. COMPARATIVE ANALYSIS OF ECONOMIC EFFICIENCY AND CLIENT IMPACT

In Chapter 3, a comparative analysis will be conducted of the economic efficiency and client impact of the Zelenska system. First, the economic model will be examined, which, in contrast to the traditional visit frequency–oriented model (FOV), is focused on customer lifetime value (CLV). It will be demonstrated that despite the reduction in the frequency of high-cost lightening services, profitability is achieved through a higher average ticket, a stable cash flow from regular maintenance procedures (toning, care treatments), and an exceptionally high client retention rate (target >85%), which makes the business model more resilient and more profitable in the long term. Next, the psychological impact on the client will be analyzed: it will be demonstrated how the system

eliminates chronic stress associated with dissatisfaction with hair quality, choice overload, and financial and time costs. The introduction of the master-mentor role and a long-term plan returns to the client a sense of control and confidence, transforming the service from a one-time transaction into a comprehensive consulting program for managing hair health and quality of life.

Economic Model: Profitability through Retention, Not Frequency

The key criterion for evaluating any in-salon technology is its economic viability. On an intuitive level, a model that assumes a reduction in the frequency of the most expensive procedures (lightening services) may appear less profitable. However, a deeper comparative analysis demonstrates the opposite: when the analytical focus shifts from one-time revenue to customer lifetime value (CLV), the picture changes in favor of this strategy.

The traditional paradigm with high visit frequency (6–8 lightening services per year) is vulnerable due to the low return rate of new clients: the average retention rate in the industry is only 35% [28]. In other words, out of ten first-time visitors, six to seven do not return for a repeat procedure, which forces the salon to invest continuously and substantially in attracting a new audience. Moreover, acquisition cost is comparable to being five times higher than the cost of retaining existing clients [26, 29].

The Zelenska Beauty Blonde System model, by contrast, is built around maximizing retention. By reducing the number of lightening services to 2–4 times per year, the system compensates for the reduced frequency through:

- Higher average ticket: the comprehensive service from diagnostics and advanced coloring techniques to consultation and a personalized care plan is positioned as premium and carries an increased price.
- Regular maintenance visits: interim procedures (toning, care treatments, haircuts) generate a stable cash flow between major coloring services.
- Exceptionally high retention coefficient: due to preservation of hair health, predictability of the result, and expert guidance, a high level of loyalty is achieved; a target retention level of 85% and above for returning clients is realistic [28].

Empirical data confirm that over time loyal clients increase their total spending by 67%, and that an increase in retention of just 5% can raise a company's profitability by 25–95% [25, 29].

Table 2 presents an analysis of existing economic models in the salon business.

Table 2. Comparative analysis of economic models in the salon business (compiled by the author based on [25, 29]).

Economic indicator	Traditional model (Driver: Frequency of Visits, FOV)	Zelenska System (Driver: Customer Lifetime Value, CLV)
Key revenue driver	Frequency of visits (FOV).	Customer Lifetime Value (CLV).
	Number of lightening procedures per year per client.	
Retention rate	Low (industry average ~35%).	High (target value >85%).
Customer Acquisition Cost (CAC)	High and constant (due to high churn rate).	Low (focus on retention rather than acquisition).
Source of cash flow	Irregular, with peaks during high-cost lightening services.	Stable and predictable (due to regular maintenance visits).
Average ticket	Standardized (price for a specific procedure).	Increased (due to service complexity, expertise, and premium positioning).
Long-term profitability	Unstable, high dependence on external traffic and marketing.	Sustainable, based on a loyal client base.
Business risks	High churn due to dissatisfaction with hair quality; price competition.	Dependence on the high qualification of the lead stylist-mentor.

Thus, the economic architecture of the Zelenska system demonstrates increased resilience. By reducing dependence on the continuous acquisition of new clients, it builds the foundation of the business on long-term trust-based relationships with the current client base, which in the long-term perspective proves to be significantly more profitable.

Impact on the Client: Reduction of Stress And Improvement of Quality of Life

In addition to the obvious benefits — strengthening hair health and transparent financial planning — the method has a pronounced positive effect on the client's psychological wellbeing. The traditional model, by contrast, often reproduces a background of anxiety and uncertainty:

Stress from dissatisfaction: the persistent struggle with fragility and damage, despite regular visits to the salon, forms a sense of helplessness and disappointment.

Stress of choice: market oversaturation with products and mutually exclusive recommendations causes cognitive overload and pushes toward chaotic and costly experimentation.

Financial and time-related stress: the necessity of frequent, expensive procedures for the sake of a "decent" appearance undermines the sense of control over resources.

The Zelenska Beauty Blonde System systematically eliminates these most vulnerable areas. A clear long-term plan, competent education in the fundamentals of care, and the role of a reliable expert-mentor return to the client a sense of agency, predictability, and confidence. Hair care ceases to be a source of concern and becomes a clear, pleasant ritual. As a result, not only the visual outcome changes, but also self-esteem and overall quality of life — the highest form of the service's value.

This transition from selling a one-time procedure to offering a sustainable result — health and confidence — radically rethinks the very notion of value in the salon industry. The client invests not in the act of coloring, but in a comprehensive program for managing hair health under the curation of a personal expert. It is precisely this shift from a transactional scheme to a consultation-based, result-oriented model that constitutes the key innovation and competitive advantage of the method under consideration.

CONCLUSION

The conducted analysis allows us to assert that the authorial methodology Zelenska Beauty Blonde System represents an integral paradigm of care for lightened hair, verified by scientific logic. It productively resolves the key tension in contemporary hairdressing practice between short-term commercial incentives, which rely on increased frequency of procedures, and the strategic task of preserving the integrity of the hair fiber. The biochemical examination of the mechanisms of keratin matrix damage confirmed that the system-forming principle of the methodology is the reduction of cumulative chemical load by prolonging the intervals between lightening sessions. Structural decomposition of the system revealed a pronounced synergy of its four components: gentle coloring technique, proactive visit regimen, the innovative master-mentor model, and a scientifically grounded, brand-agnostic product selection algorithm. Comparative economic assessment showed that the model oriented toward client retention not only exerts a more sparing effect on the hair, but also ensures greater stability and profitability over a long-term horizon compared to the traditional approach, which depends on visit intensity.

The obtained results fully correlate with the initial hypothesis. It has been demonstrated that the application of

the Zelenska Beauty Blonde System, based on the priority of hair health and systemic client education, makes it possible to simultaneously maintain the excellent condition of lightened hair and to form a highly effective business model. The latter, relying on the growth of loyalty and client lifetime value, demonstrates an advantage over transaction-oriented schemes that maximize the number of procedures.

The practical significance of the work lies in offering a ready, systematic, and reproducible framework for colorists and salon owners aiming to transition to a modern, client-centered, and evidence-based organization of services. Implementation of the methodology is capable of improving service quality, strengthening the reputational capital of the salon, and ensuring its long-term competitiveness.

The prospects for further development and investigation of the topic include:

- Formalization of the educational program: development of a standardized course based on the master-mentor model for the professional advancement of stylists.
- Conducting longitudinal studies: organization of long-term clinical observations with instrumental assessment of client hair condition (including scanning electron microscopy, tensiometry) for quantitative confirmation of the methodology's effectiveness in dynamics.
- Adaptation and expansion: modification and transfer of the basic principles of the system to work with other hair types and other forms of complex coloring in order to extend the scope of its application.

Taken together, the Zelenska Beauty Blonde System is not a set of disparate techniques, but a full-fledged professional philosophy that returns long-term client well-being to the center of focus and demonstrates that ethicality and scientific validity constitute the most reliable trajectory toward commercial success.

REFERENCES

- 1. Hair Color Global Market Report 2025 [Electronic resource]. Access mode: https://www.researchandmarkets.com/reports/5939273/hair-color-global-market-report (date accessed: 08/10/2025).
- Hair Color Market Size & Outlook, 2025-2033 [Electronic resource]. Access mode: https://straitsresearch.com/report/hair-color-market (date accessed: 08/10/2025).
- 3. Hair Color Market Size, Share, Growth, and Industry Analysis, By Types (Temporary Hair Dye, Semipermanent Hair Dye, Permanent Hair Dye, Hair Highlights and Bleach), By Applications (Home Use, Commercial Use), and Regional Insights and Forecast to 2033 [Electronic resource]. Access mode: https://www.globalgrowthinsights.com/market-reports/hair-color-market-111020 (date accessed: 10/10/2025).

- 4. Salon Services Market Size, Share & Growth Analysis [2030] Fortune Business Insights [Electronic resource].
 Access mode: https://www.fortunebusinessinsights.com/salon-service-market-104608 (date accessed: 10/10/2025).
- Salon Service Market Size & Share, Growth Trends 2025-2034 [Electronic resource]. - Access mode: https:// www.gminsights.com/industry-analysis/salon-servicemarket (date accessed: 10/10/2025).
- Hair Color Market (2025 2033) [Electronic resource].
 Access mode: https://www.grandviewresearch.com/industry-analysis/hair-color-market-report (date accessed: 10/10/2025).
- 7. How many clients do you consider to be a full clientele? : r/Cosmetology Reddit [Electronic resource]. Access mode: https://www.reddit.com/r/Cosmetology/comments/1fcdaa2/how_many_clients_do_you_consider_to_be_a_full/ (date accessed: 10/10/2025).
- 8. Blonde Hair Salon Boston Expert Blonde Maintenance Tips [Electronic resource]. Access mode: https://www.blondeandbrondesalon.com/the-edit/blonde-hair-maintenance-checklist (date accessed: 10/10/2025).
- 9. How to Maintain Blonde Hair: The Complete Guide | Wellastore [Electronic resource]. Access mode: https://us.wella.professionalstore.com/en-US/blog/haircare/how-to-maintain-blonde-hair (date accessed: 10/12/2025).
- Dias M. F. R. G. Hair cosmetics: an overview // International journal of trichology. – 2015. – Vol. 7 (1). – pp. 2-15.
- 11. Martins E. et al. Bleached hair as standard template to insight the performance of commercial hair repair products //Cosmetics. 2024. Vol. 11 (5). https://doi.org/10.3390/cosmetics11050150.
- 12. Kim D. H., Oh S. H., Chang B. S. Effects of excessive bleaching on hair: comparative analysis of external morphology and internal microstructure //Applied Microscopy. 2024. Vol. 54 (1). pp. 1-5.
- 13. Kwon S. et al. Quantifying the effects of repeated dyeing: Morphological, mechanical, and chemical changes in human hair fibers //Heliyon. 2024. Vol. 10 (18). pp.1-10.
- 14. Wortmann F. J., Quadflieg J. M., Wortmann G. Comparing hair tensile testing in the wet and the dry state: Possibilities and limitations for detecting changes of hair properties due to chemical and physical treatments //International Journal of Cosmetic Science. 2022. Vol. 44 (4). pp. 421-430. https://doi.org/10.1111/ics.12796.
- 15. Wang H. et al. Effects of age on the structure and

- bleaching/dyeing behaviour of hair //Coloration Technology. 2021. Vol. 137 (3). pp. 226-233
- Mantuan Gasparin R., Botelho Lourenço C., Ricci Leonardi G. Porosity and Resistance of Textured Hair: Assessing Chemical and Physical Damage Under Consumer-Relevant Conditions //Cosmetics. – 2025. – Vol. 12 (3). https://doi.org/10.3390/cosmetics12030093.
- 17. He Y. et al. Mechanisms of impairment in hair and scalp induced by hair dyeing and perming and potential interventions //Frontiers in Medicine. 2023. Vol. 10. https://doi.org/10.3389/fmed.2023.1139607.
- 18. Symanzik C. et al. Differences between hairdressers and consumers in skin exposure to hair cosmetic products: A review //Contact Dermatitis. 2022. Vol. 86 (5). pp. 333-343. https://doi.org/10.1111/cod.14055.
- 19. Bleaching Hair: How it Works & Preventing Damage | Philip Kingsley [Electronic resource]. Access mode: https://www.philipkingsley.com/hair-guide/hair-care-and-styling/heat-colour-processing/bleaching-your-hair.html (date accessed: 10/10/2025).
- 20. Hirai T. et al. Human hair keratin responds to oxidative stress via reactive sulfur and supersulfides //Advances in Redox Research. 2024. Vol. 10. https://doi.org/10.1016/j.arres.2023.100091.
- 21. Grosvenor A. J. et al. The physical and chemical disruption of human hair after bleaching-studies by transmission electron microscopy and redox proteomics //International Journal of Cosmetic Science. 2018. Vol. 40 (6). pp. 536-548.
- 22. Zhang D., Baghdadli N., Greaves A. J. Reinforcing chemically treated human hair with citric acid // International Journal of Cosmetic Science. – 2025. https://doi.org/10.1111/ics.13039.
- 23. Camargo Jr F. B. et al. Prevention of chemically induced hair damage by means of treatment based on proteins and polysaccharides //Journal of Cosmetic Dermatology. 2022. Vol. 21 (2). pp. 827-835.
- 24. WuX.etal.Amethodological exploration of distinguishing hair quality based on hair proteomics //Proteome Science. 2024. Vol. 22 (1). pp. 1-5.
- 25. Qu W. et al. Improving the mechanical properties of damaged hair using low-molecular weight hyaluronate //Molecules. 2022. Vol. 27 (22). https://doi.org/10.3390/molecules27227701.

- 26. El Khatib S. et al. Novel Compounds for Hair Repair: Chemical Characterization and In Vitro Analysis of Thiol Cross-Linking Agents //Pharmaceuticals. 2025. Vol. 18 (5). https://doi.org/10.3390/ph18050632.
- 27. Hair Care Market By Product Type, By Ingredient, By Hair Type, By Consumer Group, By Price, By End Use, By Distribution Channel Analysis, Share, Growth Forecast, 2025 2034 [Electronic resource]. Access mode: https://www.gminsights.com/industry-analysis/hair-care-market (date accessed: 10/12/2025).
- 28. Calculating Client Retention Rate in the Spa and Salon Industry [Electronic resource]. Access mode: https://www.meevo.com/blog/calculating-client-retention-rate/ (date accessed: 10/13/2025).
- 29. Hair Salon Service Market Size & Share Report, 2024 2032 [Electronic resource]. Access mode: https://www.gminsights.com/industry-analysis/hair-salon-services-market (date accessed: 10/13/2025).
- 30. Fernandes C. et al. On hair care physicochemistry: from structure and degradation to novel biobased conditioning agents //Polymers. 2023. Vol. 15 (3). https://doi.org/10.3390/polym15030608.
- 31. Lima C. et al. Alterations promoted by acid straightening and/or bleaching in hair microstructures //Applied Crystallography. 2023. Vol. 56 (4). pp. 1002-1014. https://doi.org/10.1107/S1600576723005599.
- 32. Igarashi K., Maeda K. Research on hair bleach that causes less hair damage and smells less pungent than ammonium hydroxide //Cosmetics. 2018. Vol. 5 (2). https://doi.org/10.3390/cosmetics5020039.
- 33. Daniels G. et al. Damage limitation: comparing the impact of polymers on bleached hair when applied during or as a post-bleach treatment. 2017.
- 34. Saddiq R. Morphological properties of hair and their variation when subjected to oxidation via chemical bleaching //Fields: Journal of Huddersfield Student Research. 2020. Vol. 6 (1). pp. 1-12.
- 35. Correlating Porosity and Tensile Strength of Chemically Modified Hair Cosmetics & Toiletries [Electronic resource]. Access mode: https://img.cosmeticsandtoiletries.com/files/base/allured/all/document/2024/05/Syed_CT_117_11_057_06.66562b5671464.pdf (date accessed: 10/13/2025).

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