BASICS OF CARIES SHARPENING AND ITS CAUSES, PREVENTION OBJECTIVES.

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Abstract. *Some historical aspects of the development of minimally invasive treatment of dental caries are covered. Invasive sealing, prophylactic filling, ART-method and tunnel restoration of dental caries are described. The indications, contraindications to these methods, as well as the evaluation of the long-term results of dental caries treatment are given. In the 2nd edition (the 1st edition was published in 2005) description and illustrations of some methods of preparation of hard tissues of teeth (bate-cave, slot), FDI recommendations on the strategy of minimally invasive treatment are added. Test questions are offered for self-control of knowledge. It is intended for 3rd year students of the Faculty of Dentistry, clinical residents.*

Keywords: *caries, prophylactic filling, Micromet-II, normal microflora.*

ОСНОВЫ КАРИЕСА И ПРИЧИНЫ ЕГО ВОЗНИКНОВЕНИЯ, ЗАДАЧИ ПРОФИЛАКТИКИ.

Аннотация. *Освещены некоторые исторические аспекты развития малоинвазивного лечения кариеса зубов. Описаны инвазивная герметизация, профилактическое пломбирование, ART-метод и туннельная реставрация кариеса зубов.*

Приведены показания, противопоказания к этим методам, а также оценка отдаленных результатов лечения кариеса зубов. Во 2-м издании (1-е издание вышло в 2005 г.) добавлены описание и иллюстрации некоторых методов препарирования твердых тканей зубов (бейт-каве, щель), рекомендации FDI по стратегии малоинвазивного лечения. Предложены контрольные вопросы для самоконтроля знаний. Предназначено для студентов 3-го курса стоматологического факультета, клинических ординаторов.

Ключевые слова: *кариес, профилактическое пломбирование, Микромет-II, нормальная микрофлора.*

The role of dental plaque in the etiology of dental caries

According to some scientists, dental plaque is an accumulation of leukocytes and desquamated cells of the oral mucosa epithelium. The quantitative and qualitative composition of the microbial flora of dental plaque is variable. Diverse species composition of microorganisms and normal microflora of the oral cavity. With poor oral hygiene increases the number of bacilliform organisms and gram-negative cocci. Fusobacterium, Actinomyces and Veilonella appear on day 4-5.

Spirochetes, Spirella and Gram-positive bacilli account for 50% of the total microbial flora on day 7. The duration of plaque maturation varies from 1 to 3 days. A distinction is made between supragingival plaque, which is localized above the gingiva, and subgingival plaque, which extends into the gingival sulcus and is characterized by the predominance of anaerobic microorganisms.

Metabolic processes in the subgingival plaque occur with the participation of gingival fluid. The majority of microorganisms in dental plaque are acid-forming. Plaque microorganisms are the main etiologic factor of caries. The rate of plaque formation is of great importance. It is established that the higher the rate of plaque formation, the more pronounced cariesogenic properties it possesses.

Introduction

Scientific research in dental materials science has led to the identification of adhesive systems as a separate class of materials [1-3]. Composite restorations cannot provide reliable bonding and marginal adhesion to enamel Section “Medical and Biological Sciences” and dentin without the use of adhesion systems. Disruption of the tooth-fillings interactive zone leads to impaired marginal adaptation and microleakage of the restoration, which resulting in depressurization and possible secondary caries. Adhesion strength is one of the most important characteristics of any material being developed. Without ensuring a sufficient level of adhesive strength, the high functional properties of materials cannot be realized. Studies of adhesive strength of modern adhesive systems and their influence on the mineral component of dental hard tissues remain topical.

Objective

To evaluate the comparative characteristic of adhesive strength of self-etching adhesives and photocomposites with dental hard tissues on the basis of microstructural analysis and microhardness determination. Material and methods of research For experimental studies, human premolars removed for orthodontic indications were used. The teeth were in physiological solution. Teeth with a shelf life of no more than 6 months from the moment of extraction are used for testing [1].

Preparation of cavities for filling was carried out with diamond burrs with red, yellow and white marking rings. Before applying the adhesive, the enamel was selectively etched with 37% orthophosphoric acid for 15 seconds. Next, BeautiBond Universal Adhesive (Shofu), a self-etching adhesive, was applied to tooth number 1 according to the manufacturer's instructions. BeautiBond Universal Adhesive is a one-component adhesive that provides etching, first coat and bonding in one working step. The filler-free and HEMA-free formulation facilitates water separation while producing an adhesive layer only 5 microns thick.

On tooth number 2, the self-etching adhesive Prime & Bond Universal (Dentsply) was applied according to the manufacturer's instructions. The adhesive formula balances hydrophobic and hydrophilic properties to ensure complete coverage and penetration into dentin. The formulation includes acetone, methacrylates (resins - di- and trimethylacrylate and dipentaerythritol pentacrylate monophosphate), and cetylamine hydrofluoride (cetylamine hydrofluoride). Next, the prepared cavities of both teeth were filled with Beautifil Flow 02 flowable composite material (Shofu), with a layer thickness of 2 mm. Then Beautifil II composite material (Shofu) was applied layer by layer, the thickness of each layer did not exceed 2 mm.

The technique of preparation of fillings of filled teeth consists of the following steps:

1-the tooth is placed in a mandrel, filled with epoxy resin solution and allowed to harden;

2-grinding and polishing of grinds are performed on Forcimat and Forcipol machines. machines manufactured by Metcon (Turkey). Determination of the adhesive strength of the filling-denture boundaries was carried out on the cross-slides by measuring the microhardness on the Micromet-II microhardness meter made by Buehler (Switzerland). The technique consists in poking an indenter (diamond pyramid with a sharpening angle of 136o) into the boundary of the filling-dental junction with a load of 200 g. This technique is based on the method of determining the adhesive strength of thin layers of coatings recommended in the following sources

REFERENCES

1. Kurbanova, N. V. (2024). Modern Presentation of Calcium-Containing Drugs in the Course of the Study of Dental Diseases. *International Journal of Alternative and Contemporary Therapy*, *2*(7), 12-14.
2. Kurbanova, N. V. (2024). CLINICAL EVALUATION OF A CRACKED AND FRACTURED TOOTH. *European Journal of Modern Medicine and Practice*, *4*(11), 544-548.
3. Kurbanova, N. V. (2024). Clinical and Morphological Featuresthe Occurrence of Tooth Decay. *International Journal of Alternative and Contemporary Therapy*, *2*(9), 128-132.
4. Ахмедова, М., Кузиева, М., & Курбанова, Н. (2025). ЗАБОЛЕВАНИЙ ВИСОЧНО-НИЖНЕЧЕЛЮСТНОГО СУСТАВА И ФОРМУЛИРОВАНИЕ ДИАГНОЗА. *Modern Science and Research*, *4*(1), 279-289.
5. Kurbanova, N. V. (2024, July). Modern Views on the use of Metal-Ceramic Structures in Dental Prosthetics. In *Interdisciplinary Conference of Young Scholars in Social Sciences (USA)* (Vol. 8, pp. 15-18). https://www. openconference. us/index. ph.

6. Kurbanova, N. V. (2024). Clinical and Morphological Featuresthe Occurrence of Tooth Decay. *International Journal of Alternative and Contemporary Therapy*, *2*(9), 128-132.
7. Saodat, A., Vohid, A., Ravshan, N., & Shamshod, A. (2020). MRI study in patients with idiopathic cokearthrosis of the hip joint. *International Journal of Psychosocial Rehabilitation*, *24*(2), 410-415.
8. Axmedov, S. J. (2023). EFFECTS OF THE DRUG MILDRONATE. *Innovative Development in Educational Activities*, *2*(20), 40-59.
9. Jamshidovich, A. S. (2023). ASCORBIC ACID: ITS ROLE IN IMMUNE SYSTEM, CHRONIC INFLAMMATION DISEASES AND ON THE ANTIOXIDANT EFFECTS. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *3*(11), 57-60.
10. Jamshidovich, A. S. (2023). THE ROLE OF THIOTRIAZOLINE IN THE ORGANISM. *Ta'lim innovatsiyasi va integratsiyasi*, *9*(5), 152-155.
11. Jamshidovich, A. S. (2023). HEPTRAL IS USED IN LIVER DISEASES. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *35*(3), 76-78.
12. Jamshidovich, A. S. (2023). EFFECT OF TIVORTIN ON CARDIOMYOCYTE CELLS AND ITS ROLE IN MYOCARDIAL INFARCTION. *Gospodarka i Innowacje.*, *42*, 255-257.
13. Jamshidovich, A. S. (2024). NEUROPROTECTIVE EFFECT OF CITICOLINE. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *4*(1), 1-4.
14. Jamshidovich, A. S. (2024). THE ROLE OF TRIMETAZIDINE IN ISCHEMIC CARDIOMYOPATHY. *Journal of new century innovations*, *44*(2), 3-8.
15. Jamshidovich, A. S. (2024). ВСЕ ЭФФЕКТЫ ПРЕПАРАТА ИМУДОН. *TADQIQOTLAR*, *31*(2), 39-43.
16. Jamshidovich, A. S. (2024). SPECIFIC FEATURES OF THE EFFECT OF THE HEPARIN DRUG. *TADQIQOTLAR*, *31*(2), 34-38.
17. Jamshidovich, A. S. (2024). USE OF GLUCOCORTICOSTEROIDS IN PEDIATRIC PRACTICE. *TADQIQOTLAR*, *31*(2), 29-33.
18. Jamshidovich, A. S. (2024). РОЛЬ ИНТЕЛЛАНОВОГО СИРОПА И ЦИАНОКОБАЛАМИНА В УЛУЧШЕНИИ ПАМЯТИ. *TADQIQOTLAR*, *31*(2), 44-48.
19. Jamshidovich, A. S. (2024). TREATMENT OF POLYNEUROPATHY WITH BERLITHION. *Ta'limning zamonaviy transformatsiyasi*, *4*(1), 201-209.
20. Jamshidovich, A. S. (2024). USE OF ASCORIL IN BRONCHIAL ASTHMA. *Ta'limning zamonaviy transformatsiyasi*, *4*(1), 191-200.

21. Jamshidovich, A. S. (2024). THE IMPORTANCE OF THE DRUG ARTOXAN. *Ta'limning zamonaviy transformatsiyasi*, *4*(1), 182-190.
22. Jamshidovich, A. S. (2024). THE ROLE OF RENGALIN IN CHRONIC BRONCHITIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(4), 116-123.
23. Jamshidovich, A. S. (2024). THE ROLE OF ALMAGEL DRUG IN GASTRIC AND DUODENAL WOUND DISEASE. *Ta'limning zamonaviy transformatsiyasi*, *4*(1), 173-181.
24. Jamshidovich, A. S. (2024). THE ROLE OF CODELAK BRONCHO SYRUP IN CHILDREN'S PRACTICE. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(4), 109-115.
25. Jamshidovich, A. S. (2024). THE AEVIT DRUG EFFECT. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(4), 124-132.
26. Jamshidovich, A. S. (2024). THE IMPORTANCE OF ALCHEBA DRUG IN POST-STROKE APHASIA. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(4), 132-138.
27. Jamshidovich, A. S. (2024). THE ROLE OF HYALURON CHONDRO DRUG IN OSTEOARTHROSIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(4), 139-145.
28. Jamshidovich, A. S. (2024). EFFECT OF SIMETHICONE DROP IN FLATULENCE. *Лучшие интеллектуальные исследования*, *14*(1), 95-101.
29. Jamshidovich, A. S. (2024). BENEFITS OF BETADINE SOLUTION. *Лучшие интеллектуальные исследования*, *14*(1), 116-122.
30. Jamshidovich, A. S. (2024). EFFECT INHALED GLUCOCORTICOIDS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND BRONCHIAL ASTHMA. *TADQIQOTLAR*, *31*(1), 171-180.
31. Jamshidovich, A. S. (2024). USE OF VIGANTOL IN RICKETS. *Лучшие интеллектуальные исследования*, *14*(1), 102-108.
32. Jamshidovich, A. S. (2024). THE VITAPROST DRUG RESULTS. *Лучшие интеллектуальные исследования*, *14*(1), 109-115.
33. Jamshidovich, A. S. (2024). THE ROLE OF BISEPTOL DRUG IN URINARY TRACT DISEASE. *Лучшие интеллектуальные исследования*, *14*(1), 89-94.
34. Jamshidovich, A. S. (2024). PROPERTIES OF THE DRUG DORMIKIND. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(5), 88-92.

35. Jamshidovich, A. S., & Komilovich, E. B. (2024). IMMUNOMODULATORY FUNCTION OF DIBAZOL DRUG. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(5), 83-87.
36. Jamshidovich, A. S., & Komilovich, E. B. (2024). ADVANTAGES OF THE DRUG HEPTRAL. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(5), 98-101.
37. Эргашов, Б. К., & Ахмедов, Ш. Ж. (2024). ГИПЕРТОНИЧЕСКАЯ БОЛЕЗНЬ ЭТИОЛОГИЯ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 59-69.
38. Komilovich, E. B., & Jamshidovich, A. S. (2024). HYPERTENSION, CLASSIFICATION AND PATHOGENESIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 50-58.
39. Komilovich, E. B., & Jamshidovich, A. S. (2024). YURAK ISHEMIYASI. STENOKARDIYADA SHOSHILINCH TIBBIY YORDAM. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 12-20.
40. Komilovich, E. B., & Jamshidovich, A. S. (2024). HYPERTENSION ETIOLOGY. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 32-41.
41. Komilovich, E. B., & Jamshidovich, A. S. (2024). CARDIAC ISCHEMIA. ANGINA NURSING DIAGNOSIS AND CARE. *Journal of new century innovations*, *46*(1), 44-52.
42. Jamshidovich, A. S. (2024). IMPORTANT INDICATIONS OF THE DRUG WOBENZYM. *Journal of new century innovations*, *46*(1), 29-32.
43. Jamshidovich, A. S. (2024). THE RESULTS OF THE EFFECT OF THE DRUG VALIDOL. *Journal of new century innovations*, *46*(1), 19-23.
44. Jamshidovich, A. S. (2024). VIFERON USE IN CHILDREN. *Journal of new century innovations*, *46*(1), 24-28.
45. Jamshidovich, A. S. (2024). USE OF DUSPATALIN (MEBEVERINE HYDROCHLORIDE) IN GASTROINTESTINAL DISEASES. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(5), 93-97.
46. Jamshidovich, A. S. (2024). ЭФФЕКТЫ СИРОПА ДЕПАКИНА (ВАЛЬПРОЕВАЯ КИСЛОТА). *Ta'lim innovatsiyasi va integratsiyasi*, *14*(2), 148-152.
47. Jamshidovich, A. S., & Komilovich, E. B. (2024). THE IMPORTANCE OF THE DRUG ALLOCHOL FOR CHRONIC CHOLECYSTITIS. *Ta'lim innovatsiyasi va integratsiyasi*, *14*(2), 133-137.

48. Jamshidovich, A. S., & Komilovich, E. B. (2024). ВАЖНЫЕ СВОЙСТВА ПРЕПАРАТА ДЕ-НОЛ (субцитрат висмута). *Ta'lim innovatsiyasi va integratsiyasi*, *14*(2), 143-147.
49. Jamshidovich, A. S., & Komilovich, E. B. (2024). SPECIAL FEATURES OF BUDECTON DRUG. *Ta'lim innovatsiyasi va integratsiyasi*, *14*(2), 138-142.
50. Jamshidovich, A. S. (2024). ЭФФЕКТИВНОЕ ВОЗДЕЙСТВИЕ ПРЕПАРАТА КЕЙВЕР. *Ta'lim innovatsiyasi va integratsiyasi*, *15*(3), 137-143.
51. Jamshidovich, A. S. (2024). USEFUL PROPERTIES OF THE DRUG YODOFOL. *Ta'lim innovatsiyasi va integratsiyasi*, *15*(3), 144-149.
52. Jamshidovich, A. S. (2024). FITOTERAPIYANING AKUSHER-GINEKOLOGIYADA AHAMIYATI. *Лучшие интеллектуальные исследования*, *15*(2), 121-125.
53. Jamshidovich, A. S. (2024). THE IMPORTANCE OF THE DRUG DOPROKIN. *Лучшие интеллектуальные исследования*, *15*(2), 109-114.
54. Jamshidovich, A. S. (2024). THE EFFECT OF DOSTINEX ON THE BODY. *Лучшие интеллектуальные исследования*, *15*(2), 115-120.
55. Jamshidovich, A. S. (2024). РЕЗУЛЬТАТЫ ЭФФЕКТИВНОГО ДЕЙСТВИЯ ПРЕПАРАТА КАНЕФРОН. *Лучшие интеллектуальные исследования*, *15*(2), 138-143.
56. Jamshidovich, A. S. (2024). СОВРЕМЕННЫЕ ЭФФЕКТЫ ПРЕПАРАТА ИНДОЛ. *Лучшие интеллектуальные исследования*, *15*(2), 126-131.
57. Jamshidovich, A. S. (2024). EFFECT OF ISMIZHEN DRUG ON BODY IMMUNITY. *Лучшие интеллектуальные исследования*, *15*(2), 132-137.
58. Jamshidovich, A. S. (2024). POSITIVE EFFECTS OF THE DRUG CARCIL. *Ta'lim innovatsiyasi va integratsiyasi*, *15*(3), 127-131.
59. Jamshidovich, A. S. (2024). РЕЗУЛЬТАТЫ ЭФФЕКТИВНОГО ДЕЙСТВИЯ КАВИНТОНА. *Ta'lim innovatsiyasi va integratsiyasi*, *15*(3), 132-136.
60. Jamshidovich, A. S. (2024). Современный Эффект Спрея Мометазон. *Research Journal of Trauma and Disability Studies*, *3*(3), 62-65.
61. Jamshidovich, A. S. (2024). THE ROLE OF" SIMONTE PLUS" DRUG IN THE MODERN TREATMENT OF BRONCHIAL ASTHMA. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *4*(5), 66-70.
62. Jamshidovich, A. S. (2024). FEATURES OF THE BIOMECHANISM OF THE DRUG LEVOMYCETIN (CHLORAMPHENICOL). *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *4*(9), 298-301.

63. Jamshidovich, A. S. (2024). THE MOST IMPORTANT INDICATORS OF OMEGA 3 SUBSTANCE IN THE METABOLISM OF THE HUMAN BODY. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *4*(10), 113-117.
64. Komilovich, E. B., & Khalimovich, M. N. (2024). CARDIAC ISCHEMIA. ANGINA CLINICAL FORMS AND DIAGNOSIS. *Journal of new century innovations*, *46*(1), 70-78.
65. Komilovich, E. B. (2024). CORONARY HEART DISEASE. ANGINA EMERGENCY CARE. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(7), 235-242.
66. Komilovich, E. B. (2024). YURAK ISHEMIK KASALLIGI. STENOKARDIYANI DAVOLASHNING ZAMONAVIY TAMOYILLARI. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 3-11.
67. Jamshidovich, A. S. (2024). THE MOST IMPORTANT BENEFITS OF GINGER FOR THE HUMAN BODY'S IMMUNITY. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *4*(11), 269-273.
68. Axmedov, S. (2024). THE SPECIFIC EFFECT OF THE DRUG" BAKLASAN" IN CEREBROVASCULAR DISEASES AND ITS PRACTICAL SIGNIFICANCE TODAY. *Modern Science and Research*, *3*(12), 485-492.
69. Komilovich, E. B. Z. (2023). Coronary Artery Disease. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, *3*(12), 81-87.
70. Komilovich, E. B. (2024). CORONARY HEART DISEASE. ANGINA TREATMENT. *Journal of new century innovations*, *46*(1), 95-104.
71. Komilovich, E. B. (2024). HYPERTENSION TREATMENT. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(7), 227-234.
72. Эргашов, Б. К. (2024). ИШЕМИЧЕСКАЯ БОЛЕЗНЬ СЕРДЦА. СТЕНОКАРДИЯ ПРОФИЛАКТИКА. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 21-31.
73. Axmedov, S. (2025). ВАЖНЫЕ СВОЙСТВА ПРЕПАРАТА ЭСКУЗАН ПРИ СОСУДИСТЫХ ЗАБОЛЕВАНИЯХ. *Modern Science and Research*, *4*(1), 380-387.
74. Axmedov, S. (2025). SPECIFIC PROPERTIES OF ROXERA DRUG IN CARDIOVASCULAR DISEASES. *Modern Science and Research*, *4*(2), 472-479.
75. Эргашов, Б. К. (2024). ГИПЕРТОНИЧЕСКАЯ БОЛЕЗНЬ ДИАГНОСТИКА. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 70-78.
76. Komilovich, E. B. (2024). HYPERTENSION DIAGNOSTICS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, *38*(6), 42-49.

77. Ravshanovna, X. L. (2021, June). MINIMALLY INVASIVE METHODS OF TREATMENT OF DENTAL CARIES IN ADULTS. In *" ONLINE-CONFERENCES" PLATFORM* (pp. 118-119).
78. Khalilova, L. (2025). MAIN ASPECTS IN CARIES DIAGNOSIS. *Modern Science and Research*, *4*(1), 707-715.
79. Khalilova, Laziza. "GLASS IONOMER CEMENTS USED IN DENTISTRY." *Modern Science and Research* 3.12 (2024): 443-450.
80. Халилова, Л., Ахмедова, М., & Кузиева, М. (2025). ОСНОВНЫЕ АСПЕКТЫ ПРИ ДИАГНОСТИКИ КАРИЕСА. *Modern Science and Research*, *4*(1), 697-706.
81. Кузиева, Мадина, Малика Ахмедова, and Лазиза Халилова. "СОВРЕМЕННЫЕ АСПЕКТЫ ВЫБОРА МАТЕРИАЛА ДЛЯ ОРТОПЕДИЧЕСКОГО ЛЕЧЕНИЯ БОЛЬНЫХ, НУЖДАЮЩИХСЯ В ПРОТЕЗИРОВАНИИ ЗУБОВ." *Modern Science and Research* 4.1 (2025): 322-333.
82. Ахмедова, М., Кузиева, М., & Халилова, Л. (2025). СОСТОЯНИЕ АЛЬВЕОЛЯРНОГО ОТРОСТКА И ПЕРИОСТА ПРИ ИСПОЛЬЗОВАНИИ СЪЕМНЫХ ПРОТЕЗОВ. *Modern Science and Research*, *4*(1), 301-310.
83. Кузиева, М., Ахмедова, М., & Халилова, Л. (2025). ГАЛЬВАНОЗ И МЕТОДЫ ЕГО ДИАГНОСТИКИ В КЛИНИКЕ ОРТОПЕДИЧЕСКОЙ СТОМАТОЛОГИИ. *Modern Science and Research*, *4*(2), 203-212.