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International Simposium of Young Scholars (USA) Table of Content Paper Title **Author Name** Page No No 114 ПЕДАГОГИК ОЛИЙ ТАЪЛИМ ТИЗИМИДА ИНФОРМАТИКАНИНГ Ильясова Зухра Кенесбаевна 403-406 НАЗАРИЙ АСОСЛАРИ ФАНИНИ ЎКИТИШНИНГ ХУСУСИЯТЛАРИ 407-408 115 Professional Ta'lim Muassasalarida Umumkasbiy Va Maxsus Toshmirzayeva Muhayyo Fanlarni O'qitishda Interfaol Usullardan Foydalanishning Pedagogik Mahkamboyevna Asoslari 116 Mamlakatimizda Portret San'atining Tarixi Va Bahodir Jalolovning 409-410 Mamatgulov Rashidbek Portret San'atiga Qo'shgan Hissasi Ravshanbekovich O'zbek Va Ingliz Tillaridagi Iqtisodiy Atamalarning Lingvistik Tahlili 117 Xamidova Durdona 411-413 Va Tarjima Muammolari Muxtorovna o'qituvchi 118 НАЦИОНАЛЬНОЕ ОБРАЗОВАНИЕ И ДУХОВНЫЙ ХАРАКТЕР Турсунов Рамзиддин 414-416 СОВМЕСТИМОСТИ Абдихалилович, Мунавварханова Махлиёхон Музаффархановна 119 Qadimgi Arabiston Davlatining Paydo Bo'Lish Tarixi Omonov Yaxyo Akbarjon o'g'li 417-422 120 Application of Expressive Means of Expression in the Essay of T. Azilova Zuhra Gulmon gizi 423-424 Kayipbergenov "Karakalpoknoma" (Proverb, Parable, Phrase, Analogy) 121 O'Zbek Tili- Millatning Qalbi, Joni, Davlatning Ustuni, Tayanchi, 425-427 Karimova Magsuda Qalgoni Янгиланаётган Ўзбекистонда ёшлар таълим-тарбиясига 122 Рўзибоев Вохиджон Зохид 428-430 берилаётган эътибор хусусида ўғли, Қосимова Гулрух Туроб қизи Жиззах 123 Бадиий қадриятларни ўргатиш (Жахон тарихи дарсларида) Миркомилов Б. М. ЖДПИ, 431-433 Тугалов Б. Б. ЖДПИ 124 Unique and Linguopoetical Properties of the Similarities Used in Qodirova Dilfuza Xalimovna 434-436 **Oman Mation's Poetry** 125 The Theory of Transition to a Market Economy in Uzbekistan Bakhodir Zokirovich 437-438 Mustafayev 126 Tritikale Navlari Urug'Larining Dala Sharoitida Unuvchanligiga Ekish Ro'zmanov Abdullo Norboy 439-441 Me'yorlarining Ta'siri 127 ХРИСТИАНЛИК ДИНИДА АВЛИЁЛАРГА МУНОСАБАТ Мадалиева Хонзода 442-444 445-447 128 ИССЛЕДОВАНИЯ ПРОЧНОСТНЫХ ХАРАКТЕРИСТИК ПОЛИМЕРНЫХ Касимов Умиджон КОМПОЗИТОВ С УГЛЕГРОДНЫМИ НАНОТРУБКАМИ НА ОСНОВЕ Кахарович, Мадаминов СВЕРХМОЛЕКУЛЯРНОГО ПОЛИЭТИЛЕНА ПРИ -40 °C Нодирбек Зафарбек угли 129 448-449 Марказий Осиё буюк мутафаккирларининг маънавий ва диний Сапарниязова Зухра мерослари ахамияти 130 Qo'shiq Dilni Yayratar Sharipova Odina 450-451 ФОЛЬКЛОР АСАРЛАРИДА МОДДИЙ МАДАНИЯТНИНГ АКС 131 Хожаниязова Гулшана 452-455 Муратбайевна, Khojaniyazova ЭТТИРИЛИШИ (қорақалпоқ миллий таомлари мисолида) Gulshana Muratbayevna 132 Умидбек Эгамбердиев 456-458 Инклюзив таълим орқали инклюзив жамиятга: Германия 133 ЎРТА АСР АРХИТЕКТУРА ЁДГОРЛИКЛАРИНИНГ БУГУНГИ КУНДА Жураева Сарвиноз 459-460 ЗАМОНАВИЙЛИК БИЛАН УЙГУНЛАШУВИ

International Simposium of Young Scholars (USA)

This conference will be organized in the USA on 10 the of October and the final proceeding will be provided on the 24th of October as a whole.

Polymer Compositions Used In Dyeing Silk Fiber with Acid Dyes

Mutalipova Diloromxon Baxtiyorjon qizi

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Annotation: Acidic conventional dyes dye natural silk in a neutral or acidic bath, they combine well in mixtures, and their coloring is uniform. However, the resistance of paints with conventional dyes to wet treatments does not always provide the necessary requirements, although the strength of paints to the action of light is sometimes quite satisfactory. In industry, the use of these dyes is allowed only when dyeing products that are not subject to washing.

Keywords: trivalent chromium, dyeing natural silk, mineral acid

From acidic metal-containing dyes, dyes with complex 1 are used in industry: 2, they dye natural silk in neutral or slightly alkaline baths and give soft colors of a limited range, but with high resistance to light and good to wet treatments. The listed properties determine the areas of application of metal-containing dyes: for dyeing yarns and yarns of various types used in the production of variegated fabrics; for dyeing sewing and embroidery threads and mainly for printing fabrics made of natural silk.

The fields of application of acid chromatin dyes are similar. They are capable of producing complex compounds with trivalent chromium on animal fibers (in particular, on natural silk), which ensures the production of paints with good strength to wet treatments and satisfactory resistance to light, especially when dyeing in dark colors. Dyeing is carried out in acid baths with simultaneous or subsequent chrome plating.

All acid dyes are highly soluble in water and are used in dyeing in the form of aqueous solutions, mainly in baths on periodically operating equipment - dyeing barges, roller dyeing machines and buckle dyeing machines.

It has already been noted that the process of dyeing natural silk (as well as wool fiber and polyamide fibers) is considered as a process of salt formation. The chemical interaction reaction occurs between the dye acid and the main fiber groups - amino groups located on the side chains and ends of the silk fibroin macromolecule.

At low pH values of the dye bath, the interaction reaction can also occur between the acid-amide groups of the fiber and the dye acid, which is confirmed by a significant increase in the absorption of the dye by the fiber.

An important indicator when using acid dyes is the indicator of interaction activity. It is this indicator that determines the strength of the painted compound.

The staining is very intensive, and the dye is selected from the bath the faster the higher its temperature and lower the pH value. With the acceleration of the dyeing process, the danger of getting an uneven spotty color increases. To eliminate this danger, the process is started at a relatively low temperature $(35-40\,^{\circ}\,\text{C})$.

In the case of neutral coloring dyes that satisfactorily align the colors, dyeing is carried out in a neutral bath, where chemicals are introduced that slow down the coloring process (Glauber's salt, some surfactants).

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When dyeing with acidic conventional dyes, requiring a slightly acidic medium to fix them on the fiber (pH = 5.5 - 6), Glauber salt (5-10% by weight of the material to be dyed) is injected into the bath, and then, 30 minutes after the start of dyeing, 30% acetic acid (1-3 ml / 1).

When dyeing with acidic metal-containing dyes that do not align the colors well enough, the process is carried out without the introduction of salt in a neutral or slightly acidic bath in the presence of surfactants that contribute to the alignment of the colors.

Chrome-plated dyes are fixed on the fiber in the form of lacquers (insoluble compounds of chromium oxide with dye). This explains the high strength of the paint to wet treatments.

Dyeing with chrome-plated dyes according to the same method is carried out in baths containing organic or mineral acid and chromium salts in the form of chromium, acetic or lactic chromium or neutral sodium chromate. The most commonly used in production is chromepik (1 g/1). Dyeing takes place in an acidic environment, where rapid and uneven staining is possible; it is very important for a hollow to strictly observe the temperature of the bath and the duration of each stage. During the dyeing process, chromium salts are absorbed by the natural silk fiber. Chromium oxide hydrate reacts chemically with fiber and dye.

The actual dyeing process (i.e., the choice of dye and the method of dyeing) largely depends on the type of fiber taken. For example, animal fibers, such as wool or silk, i.e. protein fibers, are dyed with acidic or basic dyes that react with basic or acidic groups of protein -macromolecules. On the contrary, cellulose fibers, such as cotton, flax or hemp, are often dyed with dyes that form hydrogen bonds with fiber molecules. Such dyes are called substantive. Active dyes are those that react with one of their groups with a certain group of the fiber being dyed, for example, forming ether bonds on cellulose macromolecules. All four named types of dyes, i.e. acidic, basic, substantial and active, belong to the so-called direct dyes. For synthetic polyamide fibers (silone or nylon), polyester fibers (tesil) or polypropylene, other coloring agents are used, which, unlike those considered, do not form chemical bonds with fibers.

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