Volume 1, Issue 9, December, 2023 **ISSN (E):** 2938-3811

THE EFFECT OF CONCENTRATION OF POLYMERS

Эшдавлатова Гулрух Эшмаматовна
доцент Қарши муҳандислик-иқтисодиёт институти
eshdavlatovagulrux@gmail.com

Abstract
Chemical activation of starch suspension and its effects were studied. The effect of the concentration of water-soluble polymers in the development of thickeners was determined. The effect of chemical treatment time on the properties of the resulting suspensions was determined. The influence of the concentration of thickeners on the modification process was studied.

Keywords: Polymer composition, cotton, nitron fiber, fabric, paint, thickener, ludigol, thixotropic recovery.

Introduction

As a thickener, the proposed technologies based on starch modified with compounds of PAA, K-4 drug allow to completely replace traditional thickeners such as alginate, manutex and other ingredients, while maintaining high requirements for them.

The formation of stable turbidity indicates the retention of colloidal particles in the aqueous phase of the processed suspension. As a result of chemical modification, changes are also observed in the rheological properties of pastes. [2-3]

RESULTS

In order to determine the importance of the post-effect phenomenon in chemical processing, the effect of cooking time on the viscosity of baked clays was studied. The thickening effect of the clysters begins to increase when the suspensions are kept at room temperature. The effect of PAA and K-4 concentration on the reactivity of starch was studied in the example of heterogeneous modification of starch with a modifier. If the consumption of the modifier for OK (oxidized starch) suspension without urea was 8.7% in 20 minutes, with urea it was equal to 14.4%. It appears that the reaction rate of modification of starch suspension with urea is higher than the reaction rate of OK modification without urea. [4 - 5]

Licensed under a Creative Commons Attribution 4.0 International License.

Web of Scientists and Scholars: Journal of Multidisciplinary Research

Table 1 To the properties of suspensions obtained through a vacuum cleaner effect of chemical processing time

Starch concentration , %	Modification time , min	Suspension				Starch pastes - ning rheology	
		Clotting temperature, ^{0}C	Colloidally fraction, D $_{400}$	pH	In water Eruvian fraction, %	η_{max}, Pa· s	τ_T, Pa· s 10^{-1}
	Ishlov since lma - gan an example	85-90	0.146	6.74	15.9	15.6	740
4	10	85-89	0,321	6,61	26,2	31,4	1230
	20	83-87	0,596	6,42	37,3	34,8	1370
	30	80-85	0,676	6,24	56,6	38,5	1460
	60	80-82	0,789	6,16	66,8	44,5	1690
5	10	85-89	0,471	6,60	31,4	36,7	1410
	20	82-86	0,626	6,38	39,7	41,2	1530
	30	80-85	0,714	6,18	61,8	47,4	1620
	60	80-82	0,821	6,11	73,4	51,5	1740

As a thickener, the proposed technologies based on modified starch with compounds of PAA, K-4 drug allow to completely replace traditional thickeners such as alginate, manutex and other ingredients, while maintaining high requirements for them.

DISCUSSION

The formation of stable turbidity indicates the retention of colloidal particles in the aqueous phase of the processed suspension. As a result of chemical modification, changes are also observed in the rheological properties of pastes.

In order to determine the importance of the post-effect event in chemical processing, the effect of cooking time on the viscosity of the pasted pastes was studied. When the suspensions are kept at room temperature, the foaming effect of the pastes begins to moderate.

In the example of heterogeneous modification of starch with a modifier, the effect of PAA and K-4 concentration on the reactivity of starch was studied [6] . If the consumption of the modifier for OK (oxidized starch) suspension without urea was 8.7% in 20 minutes, with urea this figure was equal to 14.4%. It appears that the reaction rate of modification of starch suspension with urea is higher than the reaction rate of OK modification without urea.

CONCLUSION

Thus, the chemical activation of starch suspension is desirable if it is carried out in an alkaline environment, because the resulting thickener meets all the requirements for rheology, the concentration of hydroxyl groups is high, and the level of binding with active dyes is relatively

Web of Scientists and Scholars: Journal of Multidisciplinary Research

Licensed under a Creative Commons Attribution 4.0 International License.

small. Developed technologies based on starch modified with PAA, K-4 drug as a thickener allow to completely replace traditional thickeners such as alginate salts, manutex and other ingredients, while maintaining high requirements for them [8].

АДАБИЁТЛАР

1. H.Ismoilova, O.Rakhimov, N.Turabaeva, G.Eshdavlatova. Irrigation regime of fine fiber cotton in the karshin steppe. Conference Committee. Indexed in leading databases – Scopus, Web of Science, and Inspec. *Scopus & Web of Science indexed.*
2. Eshdavlatova G.E. (2022). Oxidlangan starch, polyacrylamide va K-4 asosida gul bosilgan matolarning rheological va coloristic hossalari. *Composition materiallar journals* . Tashkent. No. 4, 66-68 betlar.
3. GEEshdavlatova and AXPanjiyev. (2023). Study of thickening polymeric compositions for printing fabric of blended fibers // E3S Web of Conferences 402, 14032. TransSiberia 2023. https://doi.org/10.1051/e3sconf/202340214032 .
4. HDIsmoilova, GEEshdavlatova // The influence of irrigation regimes on cotton productivity // BIO Web of Conference ces 71, 01097 (2 023) CIBTA-II-2023. https://doi.org/10.1051/bioconf/20237101097 .
5. Eshdavlatova G.E., Amonov M.R. (2021). Evaluation of the influence of the components of thickening compositions on the results of printing mixed fabrics with active dyes. *Journal of Science Development technologies* _ No. 5. –S. 54-58 .
6. Eshdavlatova G.E., Amonov M.R. (2021). Study of the rheological properties of thickening compositions for printing fabrics based on mixed fibers. *U ni ver sium: technical sciences* . No. 11 (89). Part 2. –pp.19-23.
7. Bocharov S.S., Rakhimova Z.O., Minaev V.E. (1996). Textile printing thickeners based on bentonites. Sat. tez .d okl . II Congress of textile chemists and colorists. Ivanovo. September 17-19, p. 65.
8. Eshdavlatova G.E., Amonov M.R. (2022). Rheological properties of thickening polymer compositions and printing inks based on them. *Development of science and technologies :* Scientific and technical journal. No. 3. –S. 27-31.
9. Eshdavlatova G.E. EURASIAN JOURNAL OF ACADEMIC RESEARCH. Innovative Academy Research Support Center. UIF=8.1 | SJIF = 5.685. www.in-academy.uzyu 147-152 p.
10. Eshdavlatova G.E. Progress Annals: Journal of Progressive Research. Volume 1, Issue 7, November, 2023. ISSN (E): 2810-6466. Website: https://academiaone.org/index.php/8 . 14-16.
11. Eshdavlatova G.E. Open Academia: Journal of Scholarly Research. Volume 1, Issue 8, November, 2023. ISSN (E): 2810-6377. Website: https://academiaone.org/index.php/4.

Licensed under a Creative Commons Attribution 4.0 International License.

Web of Scientists and Scholars: Journal of Multidisciplinary Research