

## Research of application possibilities of biomass used as biologically active additive in polymer compositions

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### Abstract

Currently the demand for materials, including polymer composition materials is dynamically increasing. Tendencies in assessing of current and alternative opportunities are being observed in the researches on providing relevant demand. One of these tendencies, i.e. the urgency of the researches carried out for use of biomass residues as a component of polymer composition materials should be mentioned.

Investigations of primary sources indicate the existence of the research data of biomass residues as a component of polymer compositions from the 70-s of the last century.

The present study provides information on the study of the content of new composition materials with the addition of biomass based on the exploited low-density polyethylene. In this process, such factors as the effect of biomass added to the polymer matrix on the biological activity of the composition, the application directions of the composite products, the management of the biodegradation period of the corresponding waste and etc. are analyzed.

Comprehensive assessment of the factors as change of biological activity – biodestructive resistance in a wide range of compositions corresponding to various substances in the content of the used biomasses, their impact on the composition of the relevant indicators and etc. is expedient. At the same time, it is important to take into account the aging rate of LDPE - the formation of gel- and zol-fraction, structural and chemical transformations.

The use of LDPE wastes, which have a higher mass than polymer waste and biomass residues increases the scientific-practical, mainly environmental and economic importance of the research..

### Biography:

In 2001 Rahima S. Mammadova defended Ph D thesis on “Chemistry of high molecular compounds”. Currently she is an associate professor in Azerbaijan State Pedagogical University. Results of her investigations are: dynamics of polyethylene samples aging in Azerbaijan's natural climatic conditions;

contents of new polymer compositions; new investigation method of the functional groups of aging polymers; method for investigation of the polymer compositions content; generalization of the obtaining methods of polymer compositions and etc. R.S.Mammadova is the author of more than 90 scientific works and continues research on the thesis of Doctor of Sciences on Chemistry.

### Speaker Publications:

1. Быстров Г.А., Гельперен ВМ., Титов Б.П. Обезвреживание и утилизация отходов в производстве пластмасс. Л., Химия, 1982, 264 с.
2. Вторичное использование полимерных материалов. Под.ред. Любешкиной Е.Г. М., Химия, 1985, 192 с.
3. R.S.Məmmədova. “Polietilenin müxtəlif iqlim şəraitlərində qocalmasının tədqiqi və təkrar emal zamanı modifikasiyası”. Namizədlik dissertasiyası. Bakı, 2001, 133 s.

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