Towards a “Green” Future: Biodegradable Film Developed by Uzbek Scientists

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Today, plastic waste pollutes soil and water bodies for many years, turning into a global environmental challenge.

As a solution to environmental issues, scientists from the Laboratory of High-Molecular-Weight Plant Substances Chemistry at the Institute of Plant Substances Chemistry of the Academy of Sciences of the Republic of Uzbekistan have developed a new optimal formulation for producing environmentally friendly, fully biodegradable films based on water-soluble polysaccharides derived from local plant materials.

These films are similar to synthetic polyethylene films in appearance and mechanical properties, yet they are completely safe for nature. They easily decompose in soil and aquatic environments without causing harm to the ecosystem.

Most importantly, these biopolymer films are highly promising for use in the food and pharmaceutical industries and can play a significant role in reducing plastic waste.

This development represents an important scientific and practical solution aimed at mitigating environmental problems associated with plastic waste.

The use of locally sourced plant raw materials, along with proven safety for both the environment and human health, further enhances the relevance of this innovation.

This achievement marks a significant step toward a green economy and a sustainable future.