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(57) Abstract :

Annually, approximately 4 trillion cigarette butts are discarded globally, leading to significant environmental issues due to the slow degradation of cellulose acetate, their primary component. This accumulation causes blockage of waterways, drains, and contributes to the growth of harmful microorganisms. While various recycling methods have been explored, the potential for utilizing these butts in plastic production remains largely untapped. This invention provides a novel method for converting recycled cellulose acetate from cigarette butts into bioplastics. The process involves collecting, cleaning, and chemically processing the butts to extract cellulose acetate, which is then used to produce bioplastics suitable for packaging and other applications. This approach addresses the environmental impact of cigarette butt waste by reducing landfill accumulation and pollution, while simultaneously offering a cost-effective and sustainable alternative to conventional plastics. Accompanied Drawing [FIGS. 1-2]

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