

Biodegradable Plastic Testing Laboratory

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Abstract

Application of plastics in packaging increases with the waste problem and environment concerns also increase. Most plastics are inert to microbial attack. Recent research in Thailand has sought to develop biodegradable plastics with no standard testing. Standard test methods for determining biodegradation of plastic materials under various conditions need to be developed. The carbon dioxide trapping apparatus can be used for determination of biodegradation rate of the plastics. The test method is designed to evaluate the ability of both aerobic and anaerobic biological reaction systems to degrade or destroy specific components in the vessels. The carbon dioxide production is monitored and integrates to determine the carbon dioxide production rate. After determining the carbon content of the test substance, the percentage of biodegradation can be calculated as the percentage of solid carbon of the test substance, which has been converted to gaseous in the form of the biodegradation and weight loss can also be evaluated.