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## Proposed module of environmental degradability for PLA based green geosynthetics under considering limited index test conditions

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“Green” revolution is rapidly increasing in every construction site, especially between construction and societies’ needs. Furthermore, although durability of geosynthetics should be emphasized for long-term service period, durability controlled mechanism could be required to fulfil the short-term degradability purpose for green geosynthetics. “Green Geosynthetics” are made of eco-environmental biodegradable polymeric resins or natural materials and they must maintain their needed performance such as durability, design strength, hydraulic property, etc., during service period in the application field. Then, after service period they should not be degraded in harmful state in the soil structures. The important concept of green geosynthetics is focused on their degradable behaviours of used resins and needed performance for engineering qualification with technical data of designing. In this study, technical availability of green geosynthetics was introduced and reviewed to be related to the quantitative analysis of biodegradability of green geosynthetics by conceptual consideration through its evaluation. Still now, there is no international test method to evaluate the biodegradability of green geosynthetics performance and only the geosynthetics performance test methods of ISO and ASTM International are applied for this purpose. However, it is not reasonable for green geosynthetics to adopt these test methods directly and new test methods should be introduced for green geosynthetics performance testing. In this study, the regulation of evaluation method of biodegradability for green geosynthetics between index and field tests is proposed by connection key factor to confirm the biodegradable behaviors for green geosynthetics.

### Biography

Han-Yong Jeon is a Geosynthetics/Technical Organic Materials Researcher and he was the 32nd President of Korean Fiber Society (2014~2015). He has published more than 794 papers in domestic and international conferences. He wrote 19 texts including '*Geosynthetics*' and also published 117 papers in domestic & international journals. He has awards of Marquis Who's Who - Science and Engineering in 2003~2016 and also, he got the 33rd Academy Award of Korean Fiber Society in 2006 and “Excellent Paper Award of 2012” by The Korean Federation of Science and Technology Societies.

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