

Is PLA Biodegradable?

Polylactic acid or PLA is a material which has been around for over 10 years. Until recently, no major producer of PLA existed until they were funded by mega corporations to come into the marketplace to replace synthetic plastic.

Is PLA biodegradable? While the answer is not simple, here are some of the facts:

- 1) PLA is not biodegradable, it is degradable
- 2) Enzymes which hydrolyze PLA are not available in the environment except on very rare occasions
- 3) Proteinase K catalyze the hydrolytic degradation of PLA

Williams in 1981 and Tsuji and Miyauchi in 2001 had the same question, "is PLA biodegradable"? They have written white papers around the subject and are featured in the 'Biomaterials Science: An Introduction to Materials in Medicine'. In the book and discussed at the conference of the European Society for Biomaterials, PLA is controlled by hydrolysis and the hydrolysis is independent of all biological agents.

So, while many people believe PLA to be biodegradable, it simply is not. PLA is degradable and should be considered as such. In the Biomaterials Science book, they, actually go on to say that the situation where Proteinase K hydrolyze PLA is so rare, it is not worth discussing further.

We hope this answers the question on if PLA is biodegradable and we continue to look for the best solution for your green plastic and biodegradable needs.

For more information regarding the documents listed in this article, please visit:

References:

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