



ecos

Plastics biodegradability: friend or foe?

Ioana Popescu | Senior Programme Manager | 16 June 2021

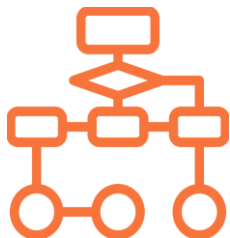
In a nutshell



international environmental NGO



technical expertise



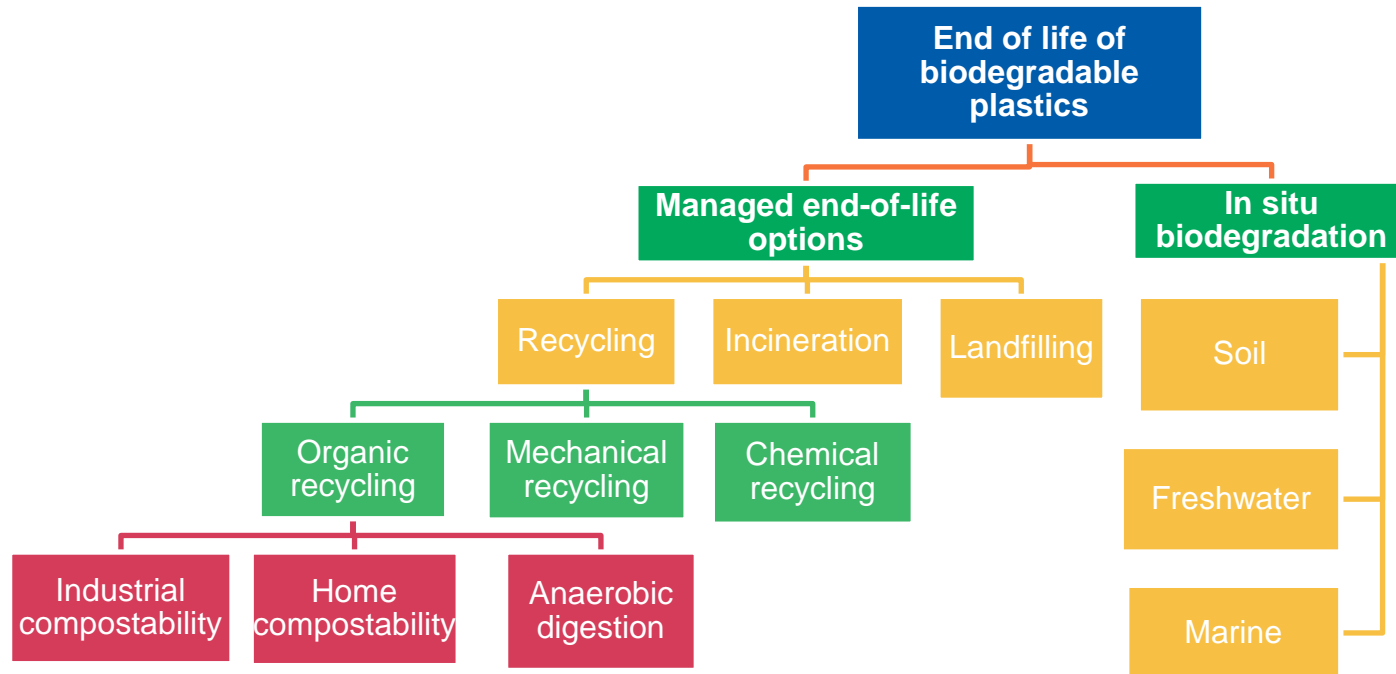
network of members & experts

A terminology issue

- Plastics biodegradability – one concept but **many different understandings**
 - Natural? Sustainable? Biobased? Organic?
 - To be returned to the environment?
 - Compostable? At home? In community composts? in industrial facilities?
 - Anaerobic digestion?

So which one is it?

- Biodegradability as a **characteristic/functionality**



So which one is it?

- Biodegradability as a **product claim**

→ **A licence to litter**

@bryanMatters



But there are standards (?!)

EN 14987:2006 (WI=00249510)
Plastics - Evaluation of disposability in waste water treatment plants - Test scheme for final acceptance and specifications

EN 14995:2006 (WI=00249507)
Plastics - Evaluation of compostability - Test scheme and specification

EN ISO 10210:2017 (WI=00249A04)
Plastics - Methods for the preparation of samples for biodegradation of plastic materials (ISO 10210:2012)

EN ISO 14851:2019 (WI=00249919)
Determination of the ultimate aerobic biodegradability of plastic material in an aqueous medium - Method by measuring the oxygen demand in a respirometer (ISO 14851:2019)

EN ISO 14852:2018 (WI=00249983)
Determination of the ultimate aerobic biodegradability of plastic material in an aqueous medium - Method by analysis of evolved carbon dioxide (ISO 14852:2018)

EN ISO 14853:2017 (WI=00249A02)
Plastics - Determination of the ultimate anaerobic biodegradation of plastic materials in an aqueous system - Method by measurement of biogas production (ISO 14853:2016)

EN ISO 14855-1:2012 (WI=00249789)
Determination of the ultimate aerobic biodegradability of plastic material under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 1: General method (ISO 14855-1:2012)

EN ISO 14855-2:2018 (WI=00249984)
Determination of the ultimate aerobic biodegradability of plastic material under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 2: Gravimetric measurement of carbon dioxide evolved laboratory-scale test (ISO 14855-2:2018)

EN ISO 15985:2017 (WI=00249A03)
Plastics - Determination of the ultimate anaerobic biodegradation under high-solids anaerobic-digestion conditions - Method by analysis of released biogas (ISO 15985:2014)

biodegradability plastics

58 RESULTS FOUND (7 MS)

ISO 14852 DETERMINATION OF THE ULTIMATE AEROBIC BIODEGRADABILITY OF PLASTIC MATERIALS IN AN AQUEOUS MEDIUM — METHOD BY ANALYSIS OF EVOLVED CARBON DIOXIDE [UNDER DEVELOPMENT]

ISO 14852:2018 DETERMINATION OF THE ULTIMATE AEROBIC BIODEGRADABILITY OF PLASTIC MATERIALS IN AN AQUEOUS MEDIUM — METHOD BY ANALYSIS OF EVOLVED CARBON DIOXIDE

This document specifies a method, by measuring the amount of carbon

Search ASTM

All Biodegradable plastics

We have found 45 results

Page 1 of 5

Refine your results

REMOVE ALL REFINEMENTS

ASTM D6954-18 Standard Guide for Degradation in the Environment by Biodegradation

Active Standard(Latest Version) Last Updated

This guide provides a framework of degradation and degree of physical well as the biodegradation and ecol degradation. Disposal environments oxidation may occur and land cover

Buy PDF Versions Work Items

Other Searches:

Biodegradability • Biodegradable Plastics • Bi



AS 5810 ABAP 20001

- **Large number** of standards & **diverse** in scope and ambition levels
- **Voluntary** in application
- All have **shortcomings**: representativity of real life conditions (T°, microorganisms, ...) and practices, pre-milling or flaking of products, choices possible within the standard (testing material or final product)

Clear and mandatory safeguards needed!

- Biodegradability is an **end of life** option
 - **Does not** contribute to value retention
 - **Not** a solution to littering
 - **Should not rely** on this functionality to solve waste management issues
- Biodegradability **in the open environment:**
 - **Scepticism** from civil society&industry alike
 - Provided **solid, stringent, EU-recognised** terminology, test methods & standard specifications are used, e.g. ECHA restriction
 - Only for **very niche** applications
 - **Should not** be allowed as product claim

Thank you

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Environmental Coalition on Standards

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