

ISO 16623:2024-12 (E)

Plastics - Marine biodegradation testing - Preparation of optimized intertidal seawater and sediment

Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	3
5 Apparatus.....	4
6 Procedure.....	4
6.1 General.....	4
6.2 Collection of sediment with less than 2 mm particle size and preparation of rinsed seawater.....	5
6.3 Preparation of refined sediment.....	5
6.4 Purification of seawater for biodegradation test from suspended seawater.....	5
7 Validity of preparation.....	6
7.1 Sediment for disintegration testing.....	6
7.2 Refined sediment for biodegradation testing.....	6
8 Preparation report of seawater and sediments.....	6
Annex A (informative) Diagram of seawater and sediment preparation — Seawater and sediment preparation by wet filtration and flotation.....	8
Annex B (informative) Preparation of seawater and sediments from seafloor sediments: Wet filtration and flotation of sediments.....	9
Annex C (informative) Evolved carbon dioxide of seawater and sediment prepared from seafloor sediments.....	11
Annex D (informative) Test validity of ISO 19679 — Validity of biodegradation test based on carbon dioxide evolved.....	13
Annex E (informative) Example of biodegradation of reference material by ISO 19679.....	15
Annex F (informative) Example of biodegradation of plastic films by ISO 19679 — Biodegradation of plastic films using rinsed seawater and sand gravel sediments.....	16
Annex G (informative) Example of live and total cell count in sediment and seawater: Live and total cell count in sediment and seawater by fluorescence method.....	17
Annex H (informative) Example of biodegradation of plastic films by ISO 19679.....	19
Annex I (informative) Interlaboratory test ISO 19679 and ISO 18830 final report.....	20
Bibliography.....	21