
Načela za analizo mikroplastike v okolju (ISO 24187:2023)

Principles for the analysis of microplastics present in the environment (ISO 24187:2023)

Grundsätze für die Analyse von Mikroplastik in der Umwelt (ISO 24187:2023)

Principes d'analyse des microplastiques présents dans l'environnement (ISO 24187:2023)

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environment (ISO 24187:2023)

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l'environnement (ISO 24187:2023)

Grundsätze für die Analyse von Mikroplastik in der
Umwelt (ISO 24187:2023)

This European Standard was approved by CEN on 23 July 2023.

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European foreword

This document (EN ISO 24187:2023) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2024, and conflicting national standards shall be withdrawn at the latest by March 2024.

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*Principes d'analyse des microplastiques présents dans
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 14, *Environmental aspects*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The analysis of plastics and microplastics is a new field in relation to other areas of environmental analysis. A large number of scientific publications exist, but they do not apply a uniform analysis, which makes it difficult to compare the results.

This document sets out key principles for the investigation of microplastics in the environment, which should be taken into account in the subsequent development of specific procedures for sampling, sample preparation and detection. A large number of the principles described in this document can be applied, analogously, to other matrices and products, including foodstuffs and drinking water. The objective is to present a pool of methods and notes that are as harmonized as possible and to make it available for use in science, businesses and administrations.

What is true for analytics is also true for definitions in the same way. On the one hand, the terms used in this document are based on existing definitions in the subject area, but on the other hand, analytical requirements are also taken into account. This applies, for example, to the term “large microplastics”. The particle size to be investigated is closely related to the detection method to be selected. In the course of future specific work, it can be necessary to modify existing definitions slightly and adapt them to new knowledge and requirements.

With regard to the definitions, including the idea of size classes, it is pointed out that discussion is ongoing in various technical committees in ISO and other standardization bodies. The definitions in this document show the status in ISO TC 61/SC 14. The definitions chosen in this document are adapted from ISO/TR 21960:2020. The basis of the classification is based on the metric sizes and the associated designations. Microplastics is thus derived from micrometres.

NOTE Microplastics can also stem from different sources not specifically mentioned in this document, such as textiles, paints and tyres.

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