

ISO 5667-10:2020 (E)

Water quality — Sampling — Part 10: Guidance on sampling of waste water

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	General aspects
4.1	Design of sampling programme
4.2	Sampling point selection - Representativeness
4.3	Frequency and time of sampling
4.3.1	Number of samples
4.3.2	Sampling time for effluent stream
5	Sampling at specific locations
5.1	Sampling from sewers, channels and manholes
5.2	Sampling from waste water treatments plants
5.3	Sampling from industrial sites
5.4	Sampling from cooling systems
6	Main types of waste water sampling
6.1	Spot sampling
6.2	Composite sampling
7	Waste water sampling
7.1	General aspects
7.1.1	Preparation of the sampling campaign
7.1.2	Arrival on site
7.2	Composite sampling for waste water quality monitoring
7.2.1	General
7.2.2	Automatic composite sampling
7.2.2.1	General recommendations on use of an automatic sampler
7.2.2.2	Automatic composite sampling, flow proportional sampling (C.V.V.T and C.T.V.V)
7.2.2.3	Automatic composite sampling, time proportional sampling and reconstituted average sample in relation to flow
7.2.2.4	Automatic composite sampling, time proportional sampling (CTCV)
7.2.2.5	Validation of the representativeness of composite sampling
7.2.3	Manual composite sampling
7.2.4	Manual sample reconstitution
7.3	Spot sampling in an effluent stream
7.3.1	General
7.3.2	Direct sampling
7.3.2.1	General
7.3.2.2	Directly into the laboratory bottles
7.3.3	Indirect sampling
7.3.3.1	From a sewer
7.3.3.2	From the edge of an open-air structure
7.3.4	Automatic, remote start or event-triggered sampling
7.4	Spot sampling of tanks — planned discharges
8	Sampling equipment
8.1	General
8.2	Automatic sampler

- 8.3 Manual sampling equipment
 - 8.3.1 General
 - 8.3.2 Ballasted sample collector
 - 8.3.3 Bucket, vertical water sampler
- 8.4 Tank sampling equipment
 - 8.4.1 Mixing
 - 8.4.2 Sampling equipment
- 9 Homogenization, preservation, transport and storage of samples
 - 9.1 Homogenization of collected volume
 - 9.2 Distribution of collected volume into laboratory bottles
 - 9.3 Preservation and packaging of samples
 - 9.4 Transportation and reception
 - 9.4.1 General
 - 9.4.2 Time
 - 9.4.3 Temperature
 - 9.5 Security and traceability of samples during storage and delivery
 - 9.5.1 Routine samples
 - 9.5.2 Samples which might be used for legal purposes
- 10 Quality assurance
 - 10.1 Avoidance of contamination
 - 10.2 Sample identification and records
 - 10.3 Assurance and quality control
- 11 Reports
 - 11.1 Analytical reports
 - 11.2 Sampling protocols
- 12 Safety precautions
 - 12.1 General
 - 12.2 Personnel safety
 - 12.3 Equipment safety
- Annex A (informative) Examples of sampling from tanks
- Annex B (informative) Advantages and disadvantages of main types of waste water sampling
- Annex C (informative) Example of cleaning protocol — Sampling equipment
 - C.1 General
 - C.2 Conditions of realisation
 - C.3 Methodology
- Annex D (informative) Example of field form — Waste water sampling
- Annex E (informative) Choice of compatible materials for automatic samplers
 - E.1 Parameters — Macro-pollutants
 - E.2 Micropollutants (e.g. priority hazardous substances, priority substances, emerging substances)
 - E.3 Synthesis of materials
- Annex F (informative) Comparison of types of pumping: peristaltic pump (PP) and vacuum pump (VAP)
- Annex G (informative) Type of distribution of collected volume into laboratory bottle
- Annex H (informative) Quality control of sampling equipment
 - H.1 General
 - H.2 Quality Control for composite automatic sampling
- Annex I (informative) Bias and repeatability