

ISO 20397-3:2025-07 (E)

Biotechnology - Massively parallel sequencing - Part 3: General requirements and guidance for metagenomics

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	4
4.1	General	4
5	Sampling strategy	5
5.1	General	5
5.2	Primary sample type	6
5.3	Primary sample stabilization and storage	6
5.4	Primary sample transportation	6
5.5	DNA/RNA isolation	7
5.6	DNA/RNA sample quality	7
6	Nucleic acid library preparation	7
7	Design and review process including sequencing strategy and assessment	7
7.1	General	7
7.2	Short read	7
7.3	Long read	8
7.4	Hybrid assembly	8
7.5	Sample preparation and library construction	8
7.6	Assessment	8
8	Database construction	9
8.1	General	9
8.2	Public database	9
8.3	Self-build database	9
9	Bioinformatics analysis	10
9.1	General	10
9.2	Identification list of microorganisms	11
10	Validation and verification	11
10.1	General	11
10.2	In silico sequence control for bioinformatics pipeline evaluation	11
10.3	Real sample control for pipeline evaluation	11
11	Evaluation	12
12	Test report	12
12.1	General	12
12.2	Test report content	12
Annex A (informative)	Checklist for NA sample quality assessment before library construction	13
Annex B (informative)	Methods for sample stabilization and storage	14
Annex C (informative)	Bioinformatics pipeline	15
Bibliography		17