

Microbiome Sequencing

Reminder:

- Kindly note that all samples will not be returned. Please ensure you have made sufficient backups of the samples in advance.
- We recommend using 2 mL tubes for sample delivery (15 mL tubes for large tissue). 50 mL tubes are not accepted.

Recommendations on tissue samples-Microbe

Species	NGS-based Genome	PB	ONT
Bacteria	1 x 10 ⁷ or 0.3 g	≥ 3.5 x 10 ¹⁰ or 0.5 g	≥ 3.5 x 10 ¹⁰ or 0.5 g
Unicellular Fungus	5 x 10 ⁶ -1 x 10 ⁷ or 1 g	≥ 5 x 10 ⁹ or 0.3 g	≥ 5 x 10 ⁹ or 0.3 g
Macro Fungus	≥ 2 g	≥ 10 g	≥ 5 g
Other Fungi	≥ 1-2 g	≥ 3-5 g	≥ 3-5 g

Recommendations on environmental sample (For 3 extraction)

Type	Amplicon	NGS-Metagenome	TGS-Metagenome
Soil/Sludge	2 g	3 g	ONT 5g; PB 10 g
Intestinal contents-Animal	0.5-2 g	0.5-2 g	ONT 3g; PB 5 g
Intestinal contents-Insect	0.1-0.25 g	0.5-2 g	ONT 3g; PB 5 g
Surface microorganism	Membrane 3/ swab 5/sediment 1-3 g	Membrane 5/ swab 5-10/sediment 3g	ONT 3g; PB 5 g
Fermentation broth	Enriched sediment 0.5 g	Enriched sediment 1g	
Feces (Large animals)	0.5-2 g	0.5-2 g	ONT 3g; PB 5 g
Feces (Mouse)	4-6 pieces	4-6 pieces	5-10 pieces
Pulmonary alveolar lavage fluid (Mouse, etc.)	Filter membranes 3	Membranes 5/Sediment 3 g	
Saliva	2 ml	2 ml	
Skin/ Genital swab/ Saliva/ Oral soft tissue/ Pharyngeal swab/ Rectal swab/ Vaginal swab	5-10 swabs	5-10 swabs	
Rumen fluid	5-10 ml/Sediment 3 g	5-10 ml/Sediment 3 g	
Waterbody/ Air/ Biofilm	Membranes 3/Sediment 1-3 g	Membranes 5/Sediment 3 g	
Endophytes	1-2 g	2-3 g	
Dental plaque	0.5-1 g	0.5-1 g	

Nucleotides sample requirements

Type	Concentration and Purity					
	Conc. (ng/μL)	Amount (μg)	Volume (μL)	OD260/280	OD260/230	Nanodrop /Qubit
NGS-Amplicon	≥ 1	≥ 0.2	≥ 20			
PB-Amplicon	≥ 5	≥ 0.3	≥ 20			
NGS-Metagenome	≥ 1	≥ 0.03	≥ 20			
PB-Metagenome	≥ 50	10 μg/cell	≥ 20	1.8-2.0	≥ 2.0	1.5-2.5
NGS-Microbial Genome	≥ 1	≥ 0.06	≥ 20			
PB-Bacterial Genome	≥ 20	1 μg DNA/1 Gb data Minimum on 1.2 μg	≥ 20	1.7-2.2	≥ 1.0	0.8-2.5
PB-Fungal Genome	≥ 20	1 μg DNA/1 Gb data Minimum on 2.0 μg	≥ 20	1.7-2.2	≥ 1.6	0.8-2.5
ONT-All Microbial Services	≥ 40	≥ 2.0	≥ 20	1.7-2.2	1.0-3.0	0.8-2.5
Type	Conc. (ng/μL)	Amount (μg)	Volume (μL)	OD260/280	OD260/230	RIN
NGS-Metatranscriptome	≥ 50	≥ 1	≥ 20	1.7-2.5	0.5-2.5	RIN ≥ 4.5
NGS-Prokaryotic mRNA	≥ 50	≥ 1	≥ 20	1.7-2.5	0.5-2.5	RIN ≥ 4.5

Recommended that stored in Nuclease-free Water or DEPC

For agarose gel, all nucleotides should have no or limited contamination, no or with degradation (The main band is clear).