

## Microbial Whole Genome Sequencing

### 1. Sample Requirements

Library Type	Sample Type	Amount (Qubit)	Volume	Concentration	Purity (NanoDrop™ / Agarose Gel)
Microbial whole genome library (350bp)	Genomic DNA	≥ 200 ng	≥ 20 µL	≥ 10 ng/µL	OD260/280=1.8~2.0; no degradation, no contamination
Microbial whole genome library (PCR-free 350bp)	Genomic DNA	≥ 1.5 µg	≥ 20 µL	≥ 10 ng/µL	

### 2. Sequencing Parameters

Platform	Illumina NovaSeq 6000
Read length	Paired-end 150 bp
Recommended Sequencing Depth	≥ 100x for bacterial genomes ≥ 50x for fungal genomes
Data quality	Guaranteed ≥ 85% bases with Q30 or higher
Turnaround time	Minimum 3 weeks from confirmation of library preparation to data releasing without bioinformatic analysis

### 3. Data Analysis Contents

#### Bacterial and Fungal Re-sequencing Standard Analysis

Data quality control: filtering reads containing adapter or with low quality  
 Alignment with reference genome, statistics of sequencing depth and coverage  
 SNP/InDel calling, annotation and statistics  
 CNV calling, annotation and statistics  
 SV calling, annotation and statistics