



## BacterialSeq - High Quality *De Novo* Sequencing

### Comprehensive and Informative

Genomic DNA is fully sequenced by long reads (ONT) with high consensus accuracy. You will receive the **fully reconstructed and annotated genome sequence** of your bacterial species.

### Speedy and Cost-effective

**Results are delivered within 3 to 7 working days after sample receipt.** The complete sequence can now be unraveled at a fraction of the cost compared to previous sequencing technologies.

### Easy Handling

All you need is to send as little as 1 µg of bacterial genomic DNA via **Microsynth's drop box system**, which **includes free and fast shipping**. Do you need to outsource your DNA isolation? Microsynth has you covered.

## Overview of BacterialSeq

Microsynth's new bacterial genome sequencing service is based on the latest long-read sequencing technology from Oxford Nanopore Technologies (ONT). It is designed for

*de novo* whole genome sequencing and assembly of genomic DNA from a clonal population of bacteria (single species, genome sizes up to 12 Mb). The sequencing yields on average a

30x genome coverage.

Microsynth has developed a sophisticated bioinformatics pipeline to accurately reconstruct and thoroughly annotate microbial chromosomes.

## Outstanding Features & Benefits

This new service is **fast, cost-effective, complete, and hypothesis-free**. Provide a clean, good quality DNA sample and receive **annotated contigs** of your bacterial genome, with a **wealth of supporting information** including complementary

species identification methods, and quality metrics such as coverage analysis. Compared to Illumina sequencing, both costs and **turnaround times are significantly reduced**. Long sequencing reads **greatly enhance the accuracy of the assembly**, even

in the presence of repetitive elements. Useful add-on services are available for an additional fee: DNA isolation, assembly polishing using supplemental Illumina sequencing, and variant calling based on a reference genome.

## ONT vs. Illumina Sequencing

Research Question or Application	ONT	Illumina
Fast and cost-effective <i>de novo</i> sequencing of an entire genome sequence	+++	+
Sequencing of GC-rich and repetitive regions without gaps	++	+
Verifying number of repeated regions	++	-
Direct sequencing of native DNA, minimally fragmented and without the need for PCR amplification	+++	-
Identification of structural variations	++	-
Nucleotide level accuracy	++	+++

## Incredibly Straightforward

1. Just submit 1 µg of a high quality DNA preparation.
2. Put your samples in one of our sample drop boxes.
3. Sit back, your sequencing results will be delivered in 3 to 7 working days following sample receipt. If you choose DNA isolation service in addition, another 4 days will be needed.

## Products

3272	BacterialSeq	3273	BacterialSeq - Polishing
3271	BacterialSeq - DNA Isolation	3274	BacterialSeq - Large Genome (7-12 Mb)
		3276	BacterialSeq - Variant Analysis

### Never Tried?

Write an email to your sales manager or [info@microsynth.ch](mailto:info@microsynth.ch) and ask for **trial set**.\*

### How to Order?

Enter our webshop via [www.microsynth.com](http://www.microsynth.com)

Click on **"ONT Sequencing"** in the green „Analysis Services“ area

Click on **"BacterialSeq"** service and follow the further instructions

### Need More Information?

Call us at +41 71 726 10 04 or

E-mail us at [sanger.support@microsynth.ch](mailto:sanger.support@microsynth.ch)

\* Trial Set: 50% discount on up to 3 bacteria, per research group