

Microsynth

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Founded (year) > 1989

Type of Laboratory > S1/S2, GMP/GLP

Areas of Activity > | Oligonucleotide synthesis
| Sanger sequencing
| Next generation sequencing
| DNA/RNA isolation
| PCR, qPCR, digital PCR
| Genotyping
| Contract research/outsourcing

Contract Research > | Contract manufacturing
(e.g. ASOs, probes)
| Assay Development
| Assay Validation (ICH Guidelines)
| GxP(-like) analysis of customer test
items (Sanger, NGS, qPCR & dPCR)
| Process outsourcing
| Genomics research

The Company

Microsynth is a leading European company in the field of nucleic acid synthesis and analysis. Its main activities involve oligonucleotide synthesis, DNA/RNA analysis and sequencing, as well as contract research and outsourcing. For over three decades, the company's goal has been to serve its customers by delivering products and services of the highest quality, on time, while offering outstanding service – and all this at competitive prices. Microsynth has subsidiaries in Germany (Microsynth SeqLab GmbH), France (Microsynth France SAS), Austria (Microsynth Austria GmbH), and Switzerland (Ecogenics GmbH). In total, Microsynth employs a staff of more than 100 people.

Oligonucleotide Synthesis

Microsynth is a pioneer and industry expert in oligonucleotide manufacturing. Customers can choose from a broad range of different backbones (DNA, RNA, 2'-MOE, 2'-OMe, LNA, PTO), modifications (MGB, GalNac, >250 in total), and purifications. From small-scale research primers to defined μmol ranges of probes for use in molecular diagnostics, up to ASOs, siRNAs, and aptamers for drug discovery applications, Microsynth can be your solution provider in the field of oligonucleotide synthesis.

DNA/RNA Analysis

More than 25 years of experience in DNA Sanger sequencing has made Microsynth one of the leading sequencing suppliers in Europe. Having established Sanger sequencing labs in Switzerland, Germany, France, and Austria, the company is able to offer a Sanger sequencing service in those countries featuring unrivalled speed and an environmentally friendly pickup service. And it has set another industry standard through its Ecoli Nightseq®. This is a new game-changing service for sequencing plasmids from *E. coli* in a much faster and more cost-effective way.

Microsynth's broad offering of high-quality next-generation sequencing services spans the full range of Illumina sequencing platforms – a comprehensive set of sequencing libraries including small RNA, total RNA, and DNA – enabling DNA and RNA sequencing of all organisms from viruses to humans, as well as plasmids

We Enrich Your Clinical Research

Assay Development

- Development of molecular biology assays (e.g. companion animal diagnostics, IVD, GMO, etc.)
- Qualification and validation of molecular biology assays according to ICH guidelines
- Cross-validation against a reference method

Biologics Testing

- Contamination and impurity testing
- Lot and final drug product release testing
- Cell line characterization

Gene Editing / Gene Therapy

- CRISPR editing analysis
- rAAV characterization
- Off-target analysis

and cosmids. Applications offered range from single loci to whole genome and transcriptome to metagenome analyses. Interpretation of results is supported by dedicated and state-of-the-art bioinformatics analysis pipelines tailored to each project type. From first-class consulting to in-house bioinformatics providing reliable and user-friendly results, all needs are met.

Beyond DNA sequencing, Microsynth has built up critical expertise in related analytical areas, such as nucleic acid isolation, PCR (from classic to qPCR to digital PCR), fragment length analyses (e.g. cell line authentication, SNaP-shot multiplex analysis), and genotyping by sequencing.

Contract Research/Outsourcing

Microsynth has considerable experience running many different research projects for its customers, including the development of new protocols. Its successful projects in basic, preclinical, and clinical research range from one-month to multi-year projects. The solid track records in microbiology, genomics, molecular biology, and bioinformatics of Microsynth's experienced researchers help its customers define the best strategy for addressing their research questions.

Microsynth offers a broad portfolio of validated techniques and protocols. Professional project management, high-throughput sample logistics, and close cooperation with customers ensure that every outsourced project is completed in a cost-efficient manner and on time. For typical applications covered by Microsynth, please see the graphic on the left.

Quality Management System

Microsynth puts every effort into constantly improving the underlying production processes, and the majority of its branches are ISO 9001:2015 certified. The NGS and Sanger sequencing department, as well as the fragment length analysis of Microsynth AG, are also ISO/IEC 17025:2017 accredited (STS 0429). Furthermore, Microsynth AG is authorised by Swissmedic to perform quality control of medicinal products using GMP Sanger sequencing. Finally, Microsynth AG is ISO 13485:2016 certified for the production and distribution of nucleic acids and components for IVD manufacturers and the provision of associated activities.