

# Ready-to-Load Sequencing

## What does “Ready-to-Load” mean?

“Ready-to-Load” means you submit a pre-prepared and indexed library pool that is directly compatible with Illumina sequencing. Microsynth does not perform any additional library preparation or QC.

## Sample Preparation, Amounts & Concentrations

Use **1.5 mL tubes** only for the samples (library pools).

- **Screw-cap tubes** are preferred (most secure)
- **Snap-cap tubes** should be Safe-Lock or SafeSeal to minimize risk of lid opening.

### Required DNA amount:

- Concentration:  $\geq 10$  nM per sample
- Volume:  $\geq 20$   $\mu$ L



## Sample QC and Sequencing Requirements

Submit a purified, ready-to-load library pool with QC results:

- **QC requirements:** Fragment size distribution and fluorescence-based quantification
- **Adapter/index requirements:**
  - Illumina-compatible adapters
  - Valid index combinations (provided during webshop registration)

### NovaSeq:

Sequencing is performed using volume-based sequencing packages (e.g., 50 million read pairs) in **2×150 bp read mode** or **2×250 bp** for amplicon libraries.

Only the following Unique Dual Index (UDI) sets are supported:

Provider	Kit and Index Set
Roche	KAPA Unique Dual-Indexed Adapter Kit
Roche	KAPA UDI Primer Mixes, 1-384 reactions
New England Biolabs	NEBNext Multiplex Oligos for Illumina, 96 UDI Pairs, Set 1-5
Takara Bio	Takara Unique Dual Index Kit (1-384)
Twist	Twist Universal Adapter System - TruSeq Compatible, Plate A-D
Revvity	NEXTFLEX UDI Barcodes Sequences 384 Set
Revvity	NEXTFLEX UDI primers small RNA seq kit v4
Illumina	Illumina Indexes Tagmentation Set A-D
Illumina	IDT for Illumina – TruSeq RNA/DNA UD Indexes v2
Agilent	SureSelect XT HS2 Index Primer Pairs 1-384 for ILM (Pre PCR)

**MiSeq:**

Microsynth sequences entire MiSeq flow cells per customer using supported read modes from **1×50 bp to 2×300 bp**.

Only the following Combinatorial Dual Index (CDI) sets are supported:

Provider	Kit and Index Set
Illumina	Nextera DNA Indexes

**Note:** There is no pooling with other customers on MiSeq.

## Order Form Completion

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Prior to shipping your sequencing samples to Microsynth, please proceed as follows to complete your order form:

1. Enter our webshop at <https://shop.microsynth.com/>
2. Click on „**Illumina Sequencing**“ in the green “Analysis Services” area
3. Depending on your library pool and desired sequencing platform, choose either “Single Tube for NovaSeq (UDI)” or “Single Tube for MiSeq (CDI)” under “**Ready-to-Load Sequencing**”.
4. Fill in the order form and submit your order.
5. Pack your samples according to this User Guide.
6. Send the samples with the printout to:.

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## Need More Information?

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