

Problematic Samples in NGS

Optimization of Nucleic Acid Isolation

Non-Traditional NGS Projects

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High performance Isolation **in IAB!**

- Reliable isolation, purification and concentration regardless of whether from cells, tissues or FFPE samples
- Both DNA and RNA suitable
- State-of-the-art Ionic Purification System (Bionano)

Load Run Buffers



8 mins
(manual)



Load Samples



50 mins
(automated)



Purified Nucleic Acid



2 mins
(manual)

- ✓ High purity
- ✓ High yield
- ✓ Better data

IAB Genome

ISOLATION

SAMPLE QC

NGS LIBRARY
PREPARATION

Library preparation:

- TruSeq DNA PCR-Free Library Prep Kit (Illumina)
- Long-Read Sequencing – Library Prep Kit (Illumina)

✓ **Unique coverage quality enabling deep insight into various genomes**



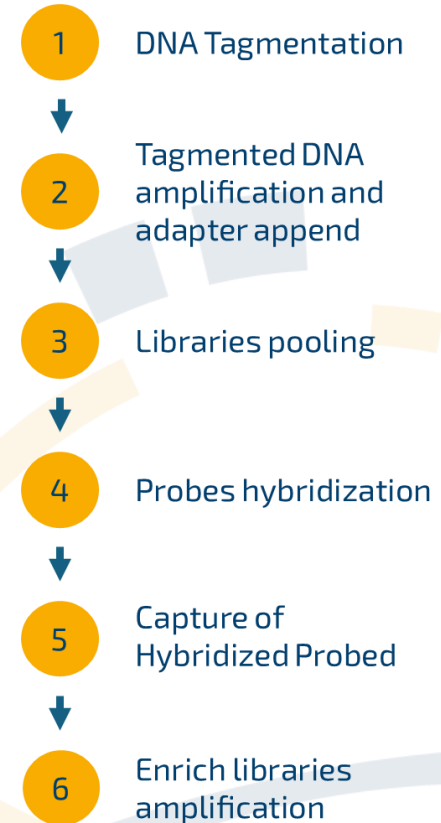
IAB Exome



Library preparation:

- Illumina® DNA Prep with Enrichment
- Twist Alliance VCGS Exome
- Twist Mitochondrial Panel

✓ **Excellent level of uniformity for sequencing efficiency**



IAB Transcriptome



Library preparation:

- SMARTer® Stranded Total RNA-Seq (Takara Bio)
➔ **for highly degraded samples (FFPE)**
- NEB Next Ultra II Directional RNA Library Prep kit (New England Biolabs)
➔ **for partially degraded samples**



✓ **NGS library preparation even from low quality or quantity of RNA possible**

Ask for full presentation [here](#) and explore more isolation and library preparation!

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