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ACCEL-NGS® 1S PLUS DNA LIBRARY KIT

The Accel-NGS 1S Plus DNA Library Kit is designed for Illumina® platforms. Utilizing Swift Biosciences' innovative technology, this kit allows DNA library construction from single-stranded DNA (ssDNA), as well as double-stranded DNA (dsDNA), which is nicked, damaged, or contains short fragments.

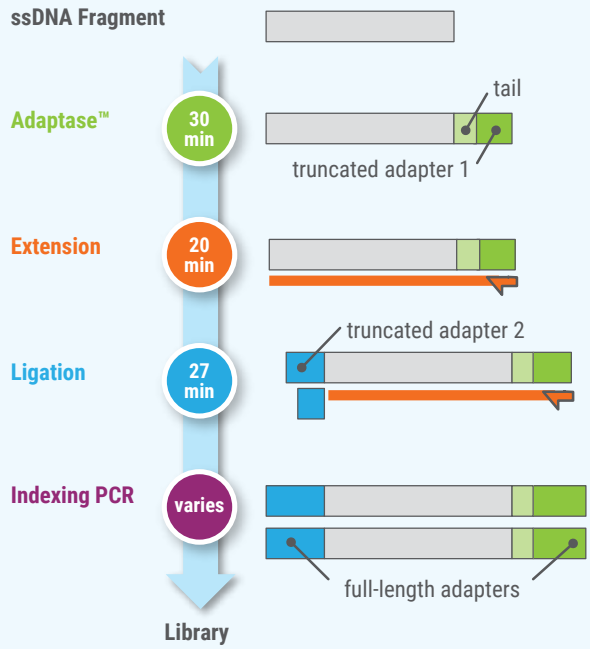
FEATURES

- Does not require intact dsDNA
- Highly efficient adapter ligation
- Inputs as low as 10 pg
- Simple, 2-hour protocol
- High sequence quality and even coverage

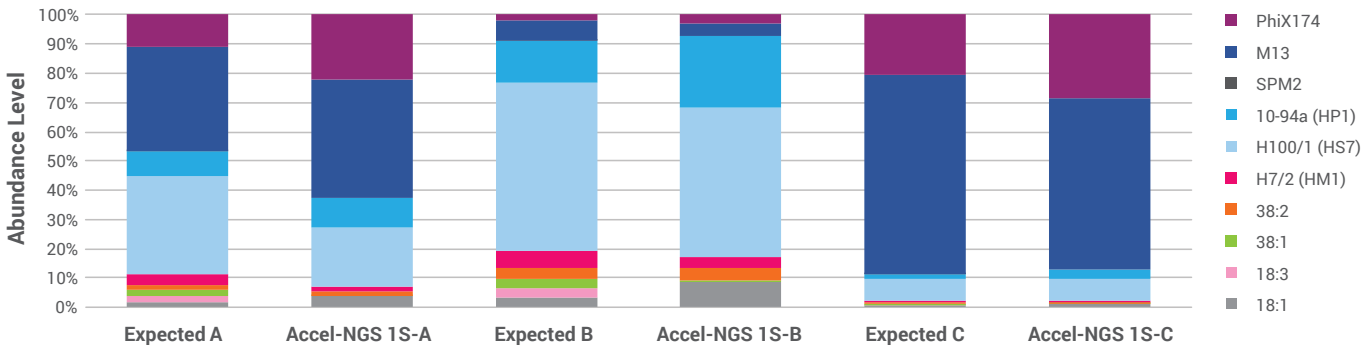
APPLICATIONS

- ssDNA samples
- Damaged samples, including nicked DNA
- Metagenomics
- Viromics
- Difficult-to-extract organisms
- Heat-denatured pathogenic samples
- Precise mapping of DNA termini

SIMPLE WORKFLOW



ACCURATE DETECTION OF BOTH ssDNA AND dsDNA PHAGE



The Accel-NGS 1S Plus DNA Library Kit was used to prepare and sequence three artificial viromes containing different proportions of the ssDNA phage PhiX174 and M13 mixed with dsDNA phage. In all cases, the proportions were preserved when sequenced with the Accel-NGS 1S Plus Kit without any prior whole genome amplification for detection of ssDNA phage.

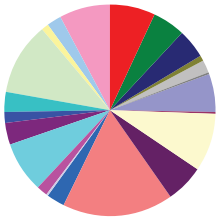
DNA EXTRACTION AND SEQUENCING OF A HARD TO EXTRACT MICROBE

EXTRACTION METHOD	QUBIT® (ng/µl)	NANODROP® (ng/µl)
Bead Beating	3.1	5.5
NaOH Boiling	< 2	107.3

FACKLAMIA SP. HGF4	BEAD BEATING	NaOH BOILING
Fold-Coverage	65.5x	52.9x
Number of Contigs	42	46
Total Consensus	1,896,447	1,892,667
Largest Contig	190,702	190,844
N_{50} Contig Size	85,449	86,622

BEAD BEATING

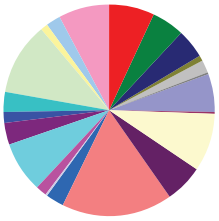
Sub-system Category Distribution



Sub-system Coverage
51% In sub-system
52% Not in sub-system

NaOH BOILING

Sub-system Category Distribution



Sub-system Coverage
51% In sub-system
52% Not in sub-system

Colors in pie charts represent different Facklamia sp. *sub-system categories as annotated by the RAST server.*

- DNA extraction by NaOH boiling produced higher DNA yields from *Facklamia sp.* than bead beating, and in less time.
- Sequencing of the NaOH extracted DNA produced a high quality *de novo* assembled genome sequence that was indistinguishable from that produced from bead beating extracted DNA.

ORDERING INFORMATION

PRODUCT NAME	REACTIONS	CATALOG NO.
Accel-NGS 1S Plus DNA Library Kit	12	DL-IL1SP-12
Accel-NGS 1S Plus DNA Library Kit	48	DL-IL1SP-48

An Accel-NGS 1S Plus Indexing Adapter Kit is required for complete functionality of the library kit.

Visit **www.swiftbiosci.com** for easy ordering.

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