CleanNA

CleanNGS

DNA and RNA cleanup

DNA and RNA cleanup for next generation sequencing libraries

Sequencing with a head start

Since its introduction in 2005, Next Generation Sequencing (NGS) opened many doors in the fields of translational genomics and molecular diagnostics by massive parallel decoding of DNA or RNA fragments. To generate high quality NGS data, preparation of pure DNA or RNA of a specific length is one of the key process steps. We offer our CleanNGS for library cleanup and size selection to make this process simple and reliable.

Our special buffer formula ensures optimal size selection for NGS libaries and the high quality magnetic beads allow faster separations and better RNA/DNA recovery. CleanNGS is produced RNase free, which makes it an ideal solution for all downstream RNA or DNA NGS experiments.

Benefits:

- **Easy automation**
- **DNA and RNA**
- **Suitable for PCR/NGS**
- **Fast and efficient**

Application

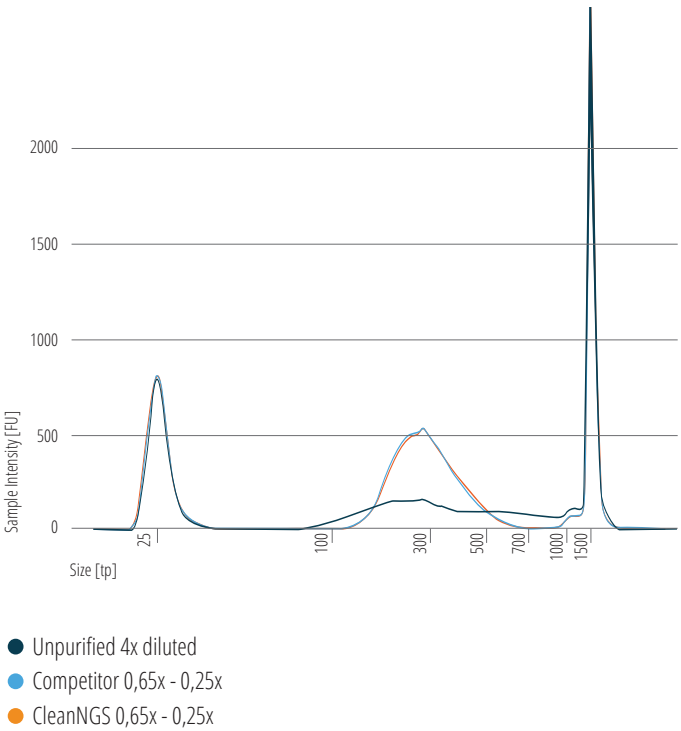
CleanNGS is suited for cleanup in between library prepping steps, after library prepping, for size selection, or for cleanup for other techniques such as PCR or cloning to improve the quality of your results.

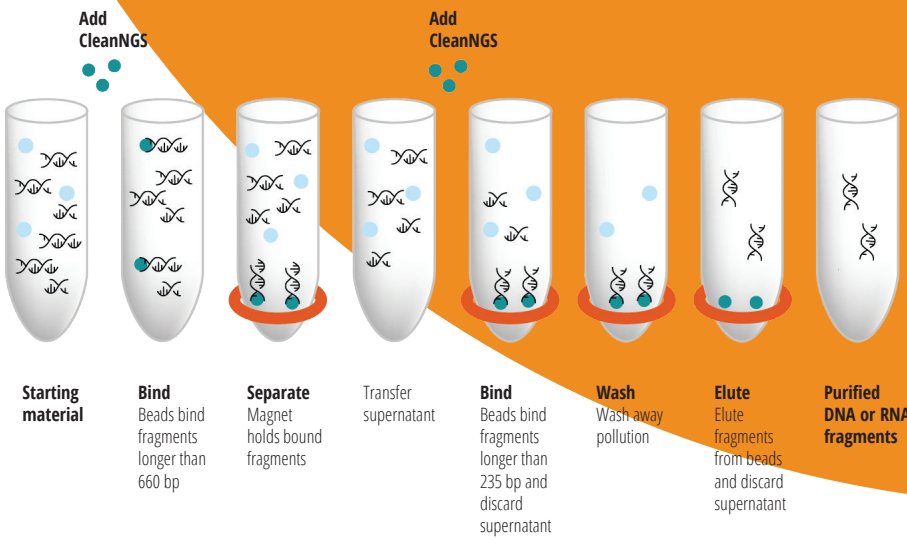
Proof of principle

To check the size selection efficiency of CleanNGS, we used sheared genomic DNA and performed a double-sided size selection using 0.65x/0.25x (left/right) ratio's with CleanNGS versus Company X. We eluted in 25 µl and analysed the DNA on an Agilent TapeStation 2200. Figure 1 shows that both products extract a set of DNA fragments with similar sample intensity between 100 and 700 base pairs.

FIGURE 1.

Electropherogram of DNA cleanup product after using CleanNGS and Company X purification.





Workflow

For double sided size selection, we first add CleanNGS reagent with magnetic beads in a certain volume ratio. Separate the large DNA or RNA fragments from the solution with a magnetic plate and add more CleanNGS reagent to the supernatant to clean up the small DNA fragments and inhibitors. After two washing steps, the purified DNA or RNA is eluted.

In another experiment, we purified 10 µl of a 50 bp ladder using our CleanNGS versus Company X, according to the manufacturer's protocols. After elution in 20 µl we analyzed the DNA with the Agilent's TapeStation 2200. The data in Figure 2 shows bands of around similar intensity for CleanNGS and Company X.

We also performed Next Generation Sequencing. After a DNA library cleanup using the CleanNGS and Company X, we sequenced the DNA with the Miseq sequencer. Data shows that the alignment percentages for both product are comparable (Figure 3) and CleanNGS bead cleanup results in the highest library yield (Figure 4).

FIGURE 2.
Ladder cleanup with CleanNGS versus Company X.

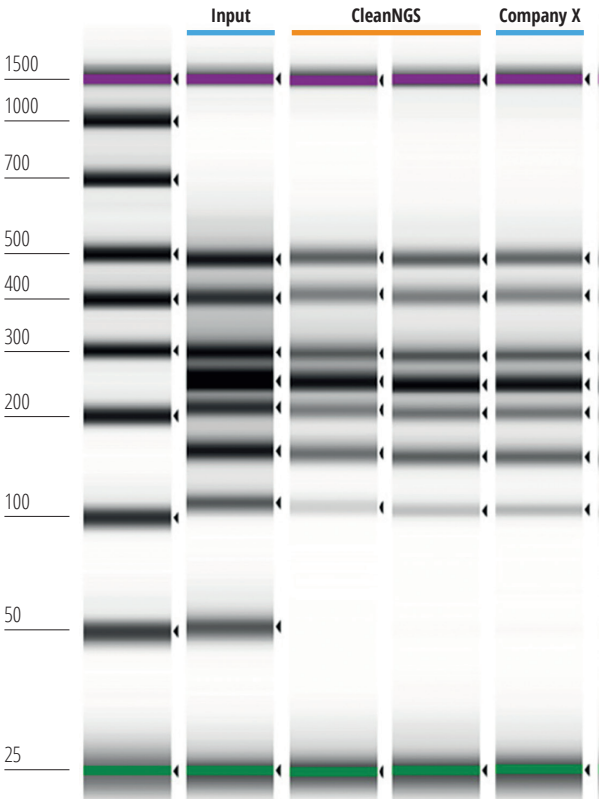


FIGURE 3.
Alignment percentages after CleanNGS and Company X cleanup.

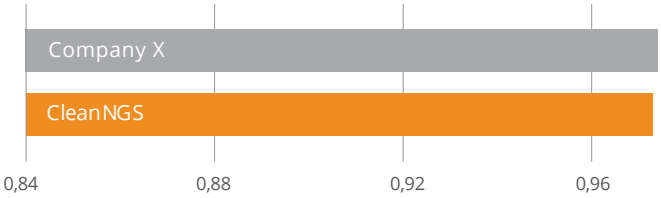
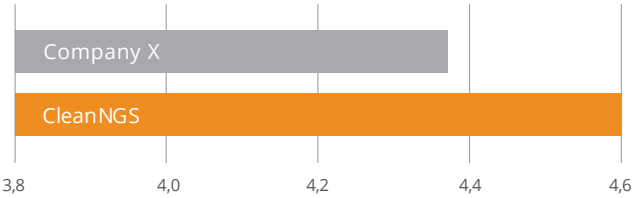


FIGURE 4.
Library concentration in ng/uL after CleanNGS and Company X cleanup.



About CleanNA

Isolation of nucleic acids often comes with challenges and CleanNA thinks that no researcher should have to face them alone. At our facilities in the Netherlands, we produce nucleic acid isolation kits and reagents. We offer complete solutions with magnetic beads that meet researchers' needs while significantly reducing their hands-on time.

ISO 13485 BUREAU VERITAS Certification

Our quality management system is EN-ISO 13485 certified by Bureau Veritas

Ready to order?

Order via your local distributor or contact us via our details below.

Order info

Product	Preps	Part Number
CleanNGS 1 mL	55	CNGS-0001
CleanNGS 50 mL	2.777	CNGS-0050
CleanNGS 500 mL	27.777	CNGS-0500

Product	Pack size	Part Number
Clean Magnet Plate 96-Well	1 Plate	CMAG-96-RN50

CleanNGS is distributed by:

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