



The DNAFluid+ Kit for viscous DNA eliminates the challenges of using highly viscous extracted DNA samples for any downstream steps and QC. The DNAFluid+ Kit consists of proprietary «Hydropore-Syringe» and «Hydro Tube» shearing accessories that reduce the viscosity of DNA by pre-conditioning high molecular weight DNA prior to shearing on the Megaruptor 3.

This combination of the DNAFluid+ Kit and the Megaruptor 3 together achieve effective, automated homogenization of highly viscous DNA samples while keeping the integrity of the DNA and full control of the DNA size prior to any downstream applications. Note, the DNAFluid+ Kit pre-conditions viscous DNA and shearing is accomplished with the use of the Megaruptor 3 in conjunction with this kit.

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*For any assistance, please, contact us at <https://www.diagenode.com/en/pages/support>*

## Note before starting

When the Circulomics Nanobind Kit and protocol is used to extract (u)HMW DNA:

- Use no more than 5 million cells/sample to extract DNA
- Use 150 to 199  $\mu\text{l}$  as a final elution volume.

Optional: Incubate extracted DNA 10 min at 37°C before proceeding with the DNA Fluid+ Kit.

1. **Transfer** your extracted DNA sample to the Hydrotube
2. **Spin** your samples briefly (2 - 5 s) in a benchtop centrifuge.
3. **Start** and **initialize** the Megaruptor.

Go to 'Protocols' and 'Go & Shear' to start the pre-conditioning process.

4. **Set the shearing parameters in the Mega3 software.**
  - Set the volume to a value between 150 and 199  $\mu\text{l}$
  - Set the speed to 40 (as a good starting point)
  - Set the concentration to any value below 50 ng/ $\mu\text{l}$
5. **Plug** the Hydrotubes with the extracted DNA sample (from step 1) to the DNA Fluid+ Hydropore-Syringe
6. **Insert** the samples into the cassette. *(Note: Always use a consumable in channel 1 and 8. If one samples only will be treated, use an empty consumable as a balance.)*
7. **Start** the protocol and check if the samples are passing through the Hydropores during the first couple of minutes.
8. Once the protocol ended, the samples are ready to be sheared with the Megaruptor 3.

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