The high-throughput method for extracting HMW DNA from human tissue can be completed in 2h and is easily scaled to large numbers of samples. Tissue samples are frozen in Covaris tissueTUBEs and rapidly cryofractured using the cryoPREP Automated Dry Pulverizer. HMW DNA surpassing 300+ kb was obtained from a variety of human tissue types. 25 – 50 mg of tissue was used per extraction and resulted in ample DNA for long-read sequencing library preparation.

The high-purity samples with near ideal UV ratios resulted from the low hands-on time and the highly reproducible processing and extraction performance. No size selection was performed on the initial 48h runs. An average of 9 Gb of data was obtained for each of the 5 tissue types.

Conclusions

• Highly reproducible processing and extraction performance
• Low hands-on time
• Easily scaled to large numbers of samples
• Consistent sequencing performance across diverse types of human tissue