Materials

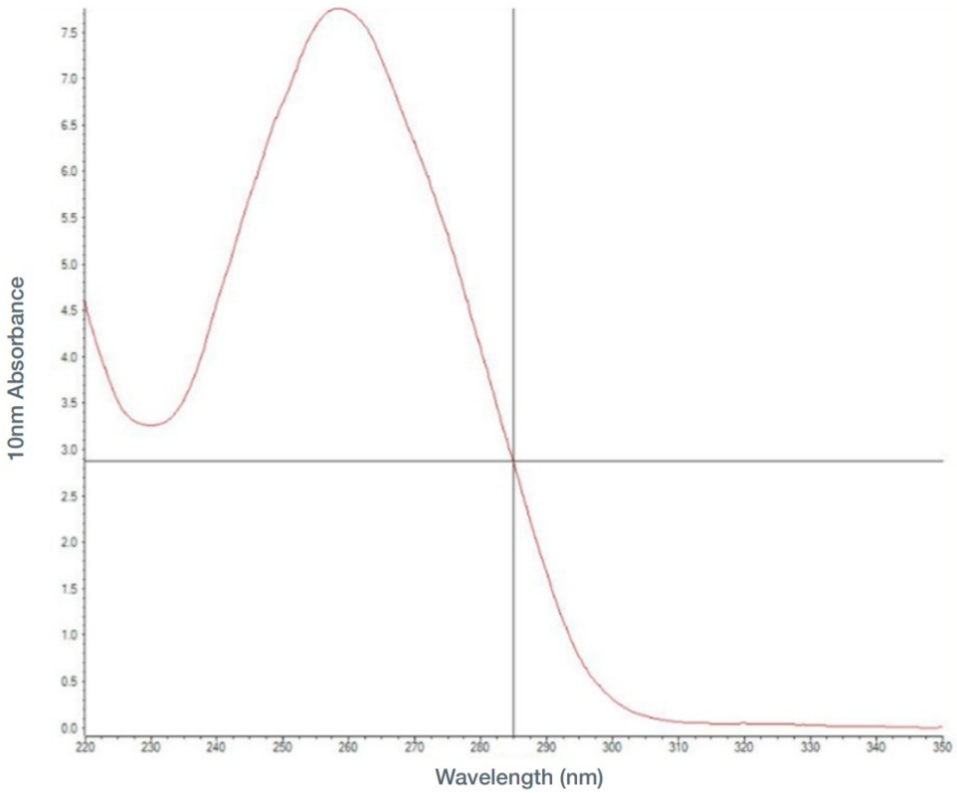
- Cell culture
- Qiagen Blood and Cell Culture DNA Maxi Kit
- 70% ethanol in nuclease-free water
- TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0)
- 50 ml Falcon tubes
- Shaker for Eppendorf tubes
- Microfuge

Method

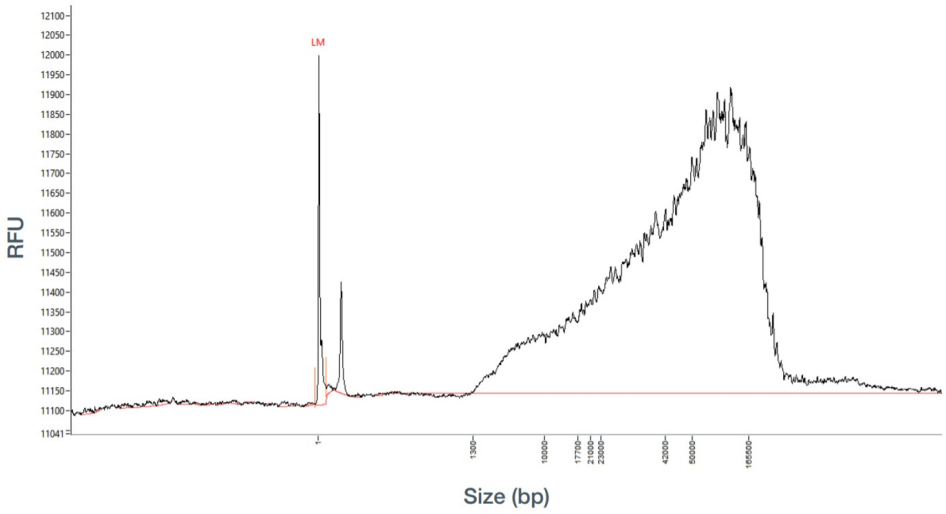
1. Harvest 1 x 10^8 cells and lyse them according to the QIAGEN Genomic DNA Handbook from the Preparation of cell culture section on page 25.
2. Follow the QIAGEN Genomic-tip handbook, starting on the Isolation of genomic DNA from blood, cultured cells, tissue, yeast, or bacteria using genomic-tips secton on page 49.
3. **Optional Step:** At the elution stage, use buffer QF warmed up to 50°C, and spin down the precipitated DNA at 4300 g for 15 minutes at 4°C. Wash the pellet with cold 70% ethanol, and spin down at 4400 g for 10 minutes at 4°C.
4. Resuspend the pellet in 1 ml of sterile TE (10 mM Tris-HCl 1 mM EDTA, pH 8.0) on a platform shaker overnight at room temperature.

Results

- **Yield:** 400-450 ng/µl
- **OD 260/280:** 1.9
- **OD 260/230:** 2.4



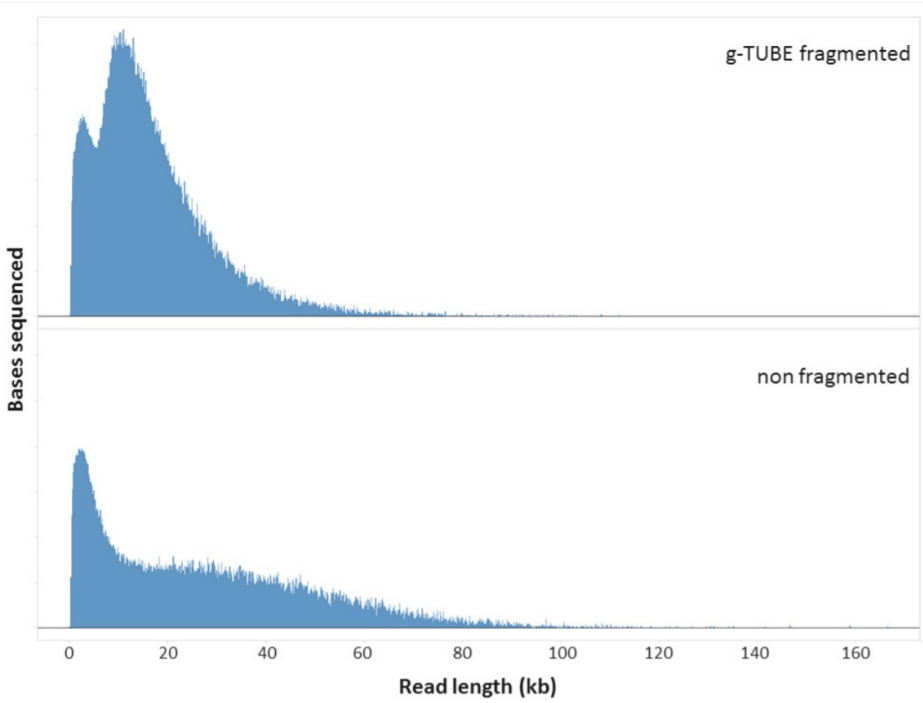
- **Fragment size (FEMTO pulse):**



Sequencing performance

Libraries for Nanopore sequencing were prepared using the Ligation Sequencing Kit.

- Read length profile with and without g-TUBE fragmentation, and sequencing:



Version	Change
v1, January 2022	Initial protocol release
v2, June 2023	Removed reference to specific kit codes
v3, August 2023	Updated materials required and updated QIAGEN protocol name