Materials

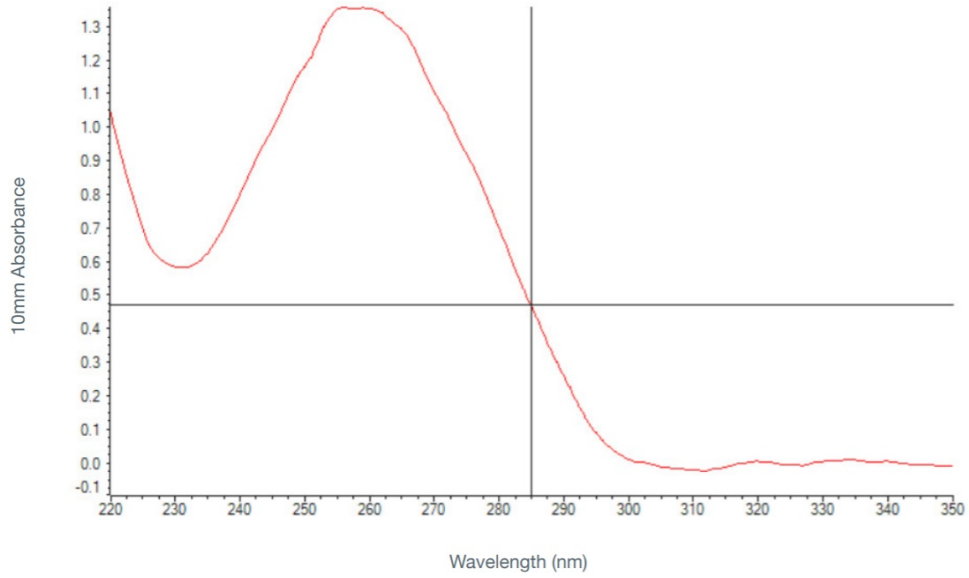
- 10 ml of blood, collected in K2-EDTA
- QIAGEN Blood and Cell Culture DNA Maxi kit
- 70% ethanol in nuclease-free water
- Isopropanol
- TE buffer (1 mM EDTA, pH 8.0)
- 1.5 ml Eppendorf DNA LoBind tubes
- 50 ml Falcon tubes
- Centrifuge and rotor for 50 ml Falcon tubes
- Incubator or water bath set at 50°C

Method

1. Perform cell separation and lysis according to the QIAGEN protocol (Preparation of blood samples section) (page 21).
2. **Critical step:** Lyse the nuclei for 1 hour at 50°C to ensure the lysis of all the cells, using the reagent quantities described in the protocol (page 24).
3. Purify the lysate according to the QIAGEN protocol (Isolation of Genomic DNA from Blood, Cultured Cells, Tissue, Yeast, or Bacteria using Genomic-tips section) (page 49).
4. **Critical step:** To maximize the DNA yield we recommend that the elution is performed for 2 hours at 50°C, using 200 µl TE (1 mM EDTA, pH 8.0), occasionally mixing the tube contents by gentle inversion.
5. Take 3 µg of eluate and perform a SPRI size selection.

Results

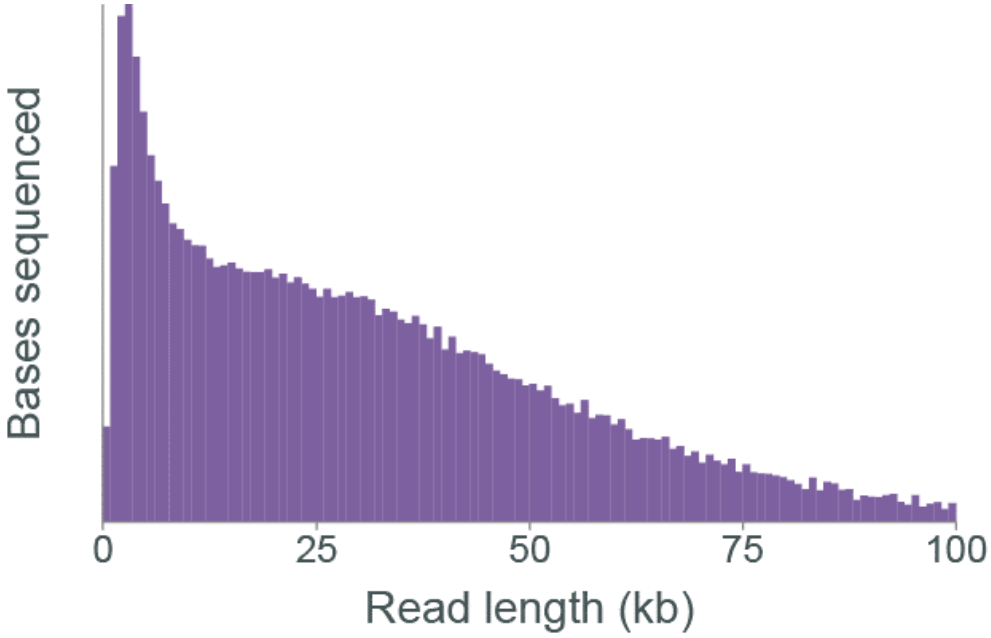
- **Yield:** 90-120 µg
- **OD 260/280:** 1.93
- **OD 260/230:** 2.33



Sequencing performance

Libraries were prepared using the Ligation Sequencing Kit.

- Read length profile:



Change log

Version	Change
v1, 27th July 2019	Initial protocol publication
v2, 14th August 2023	Updated protocol links and page numbers