**AdditionalFile1. Protocol for extraction of high molecular weight genomic DNA for SMRT sequencing.**

About 5g of frozen leafs were homogenized by grinding. Samples were mixed in a 1:10 ratio with extraction buffer (Table 1) and incubated at 65°C for 30 minutes with six inversions to mix the samples again. After five minute spinning at 5,000xg, the supernatant was transferred and mixed with one volume of chlorophorm/isoamylalcohol (24:1). Again, the upper phase was transferred after repetition of the centrifugation step for ten minutes. RNA was removed by adding 30µL RNase A (10mg/ml) and incubation for 30 minutes at 37°C. Addition of chlorophorm/isoamylalcohol, centrifugation and transfer of supernatant were repeated. One volume of isopropanol and 0.1 volumes of 3M NaOAc (pH 5.2) were added and mixed. DNA was precipitated by incubating at -80°C for 30 minutes and spinning for 45 minutes at 5,000xg. A final ethanol wash step was performed to further purify the DNA. Finally, 500µl of 10mM Tris/HCl (pH 8.0) were added and samples were incubated over night at 4°C for resuspension.

Table 1: Extraction buffer components for isolation of high quality genomic DNA.

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| **Component** | **Concentration** |
| Tris (pH 8.0) | 300mM |
| EDTA (pH 8.0) | 25mM |
| sodium chloride (NaCl) | 2M |
| polyvinylpyrrolidone (PVP) | 2% |
| hexadecyltrimethylammonium bromide (CTAB) | 2% |