

Supplementary information

Temporary property changes and moisture-driven recovery in thermo-mechanically densified birch and aspen wood

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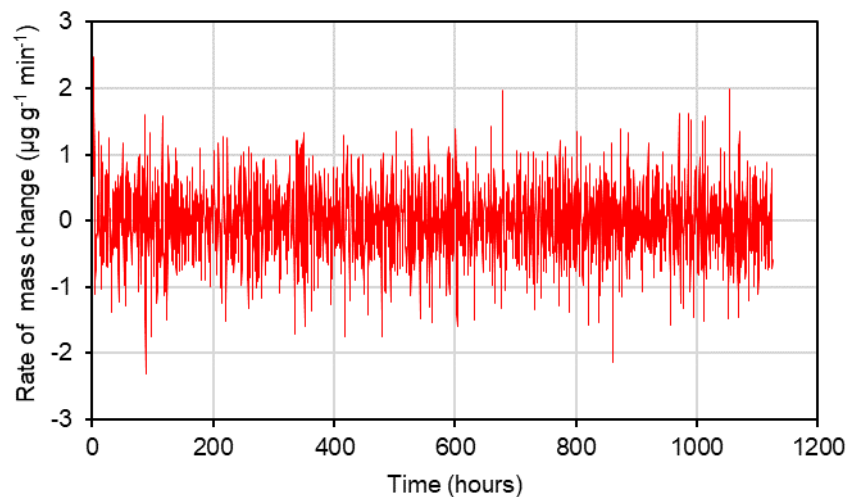


Fig. S. 1: Rate of sample mass change over time measured in a moving 3-h window for a 115 mg aluminium DSC pan. The minimum mass was used as the reference mass to calculate the sample mass change.

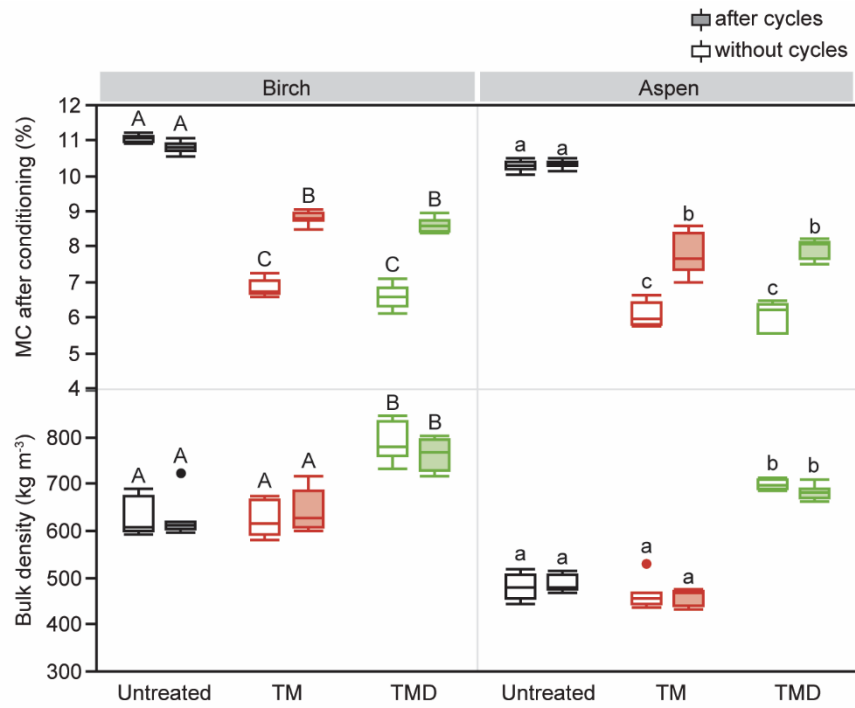


Fig. S. 2: Moisture content (%) and bulk density (kg m⁻³) measured after conditioning the wood samples at 20 °C and 65 % RH for ca. 3 months. Different letters display significant differences ($p < 0.05$) based on a one-way ANOVA with Tukey's post hoc test for pairwise comparisons.

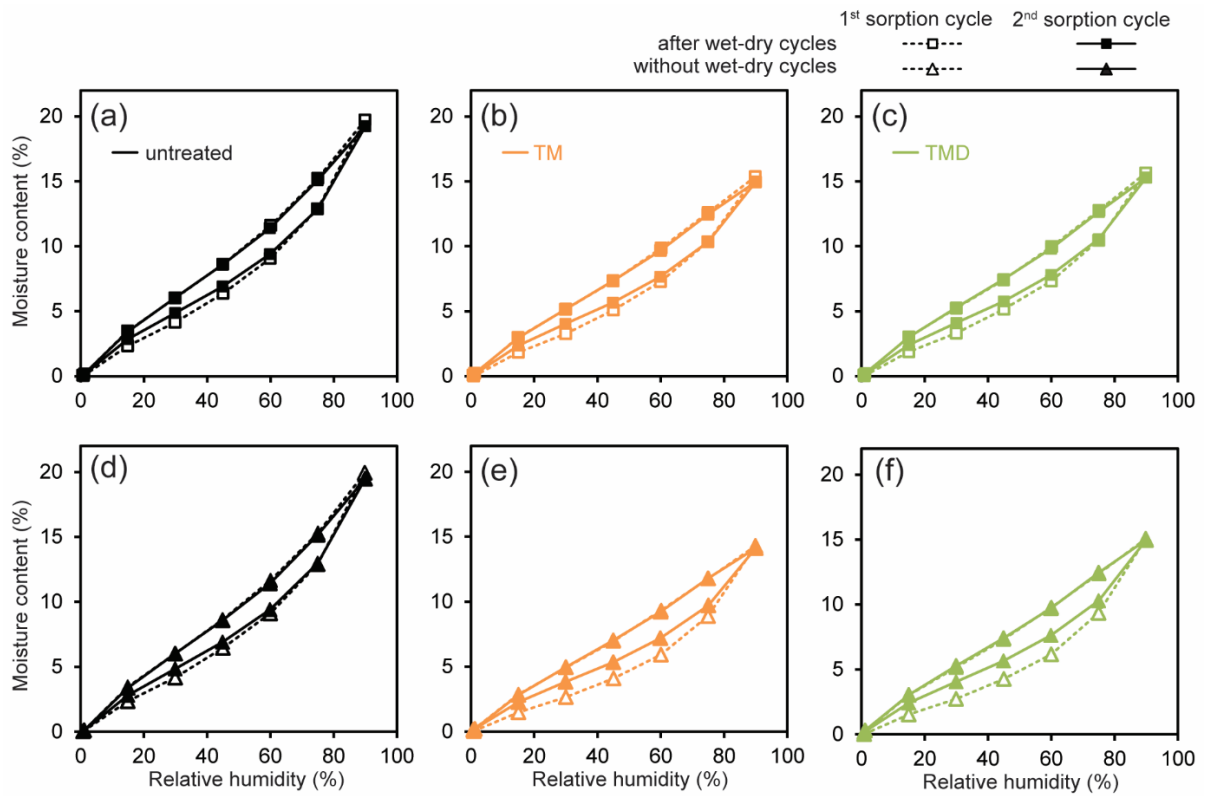


Fig. S. 3: Water vapour sorption isotherms of powder samples from birch wood. Samples in (a)-(c) underwent wet-dry cycles before the measurement, whereas samples in (d)-(f) did not.

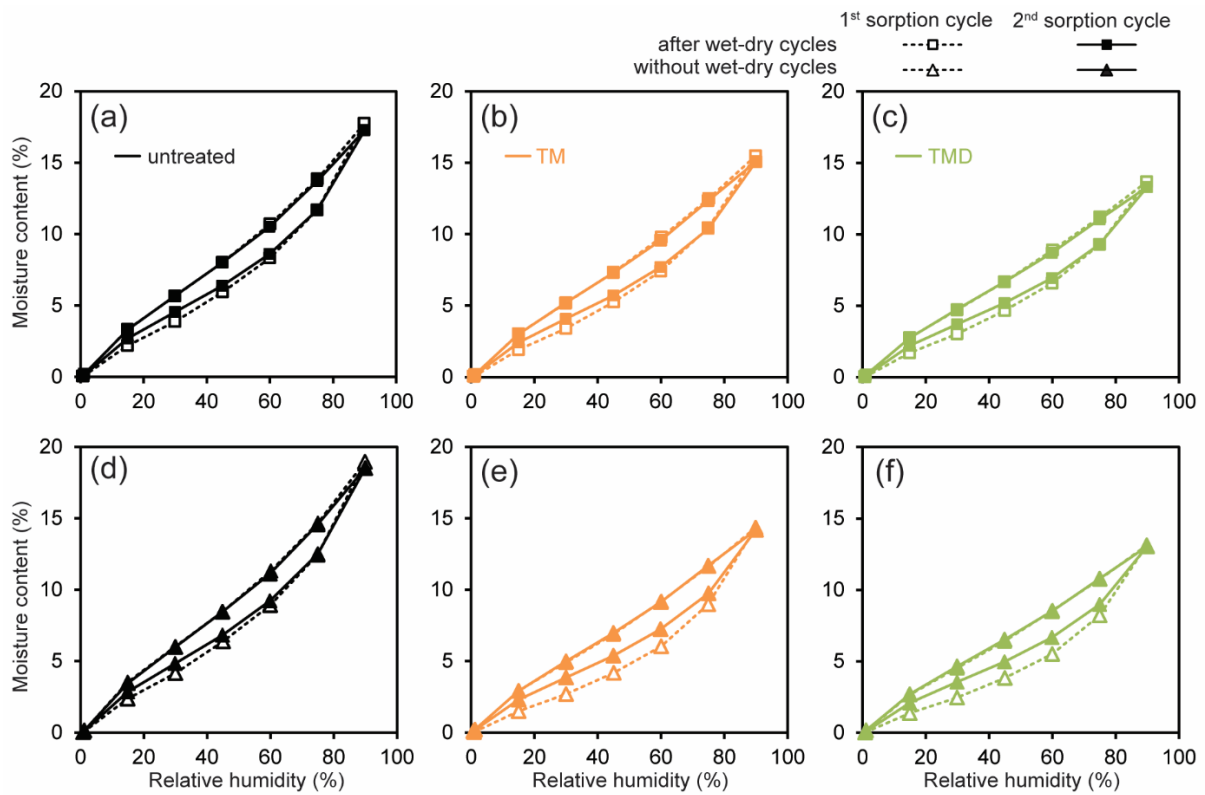


Fig. S. 4: Water vapour sorption isotherms of powder samples from aspen wood. Samples in (a)-(c) underwent wet-dry cycles before the measurement, whereas samples in (d)-(f) did not.

Table S. 1: Summary of ANOVA model statistics.

Response	Species	Equal variances	DF	F- value	p-value	Model R²	Comments
Brinell hardness	Birch	Yes	5	28.56	<0.001	74.84%	Tukey post-hoc groups shown in Fig. 5 (a)
Brinell hardness	Aspen	Yes	5	33.46	<0.001	77.71%	Tukey post-hoc groups shown in Fig. 5 (b)
Indentation modulus	Birch	Yes	5	37.70	<0.001	79.71%	Tukey post-hoc groups shown in Fig. 5 (c)
Indentation modulus	Aspen	Yes	5	26.65	<0.001	73.52%	Tukey post-hoc groups shown in Fig. 5 (d)
Thickness change	Birch	Not assumed	5	167.95	<0.001	80.38%	Games-Howell post-hoc groups show in Figure 7 (a)
Moisture content	Birch	Not assumed	5	439.59	<0.001	91.37%	Games-Howell post-hoc groups show in Figure 7 (b)