

## Supplementary information

### **Flexing with lignin: Lignin-based elastomers synthesised from untreated kraft black liquor**

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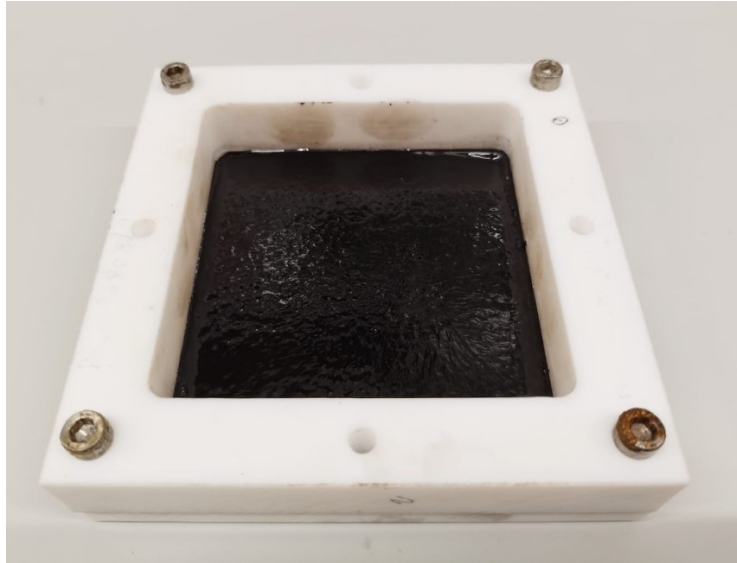
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Pictures of samples used for tensile testing (cyclic and non-cyclic) and material in as produced in a Teflon mold



*Figure 1: Example of test specimens used for cyclic mechanical tests and tensile testing*



*Figure 2: Mould with polymer used to produce films from which specimens for various tests have been cut/stamped out.*



*Figure 3: Impression of soot-evolution and flame during burn test.*

Cyclic mechanical testing data

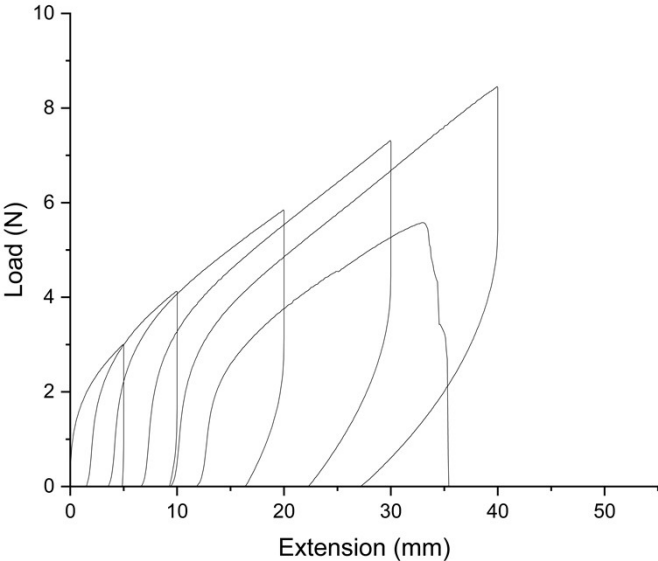


Figure 4: Curves of cyclic mechanical testing run.

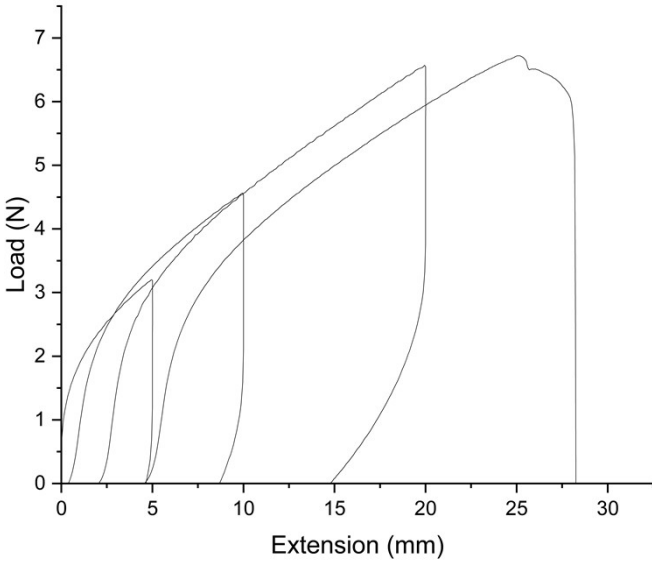


Figure 5: Curves of cyclic mechanical testing run.

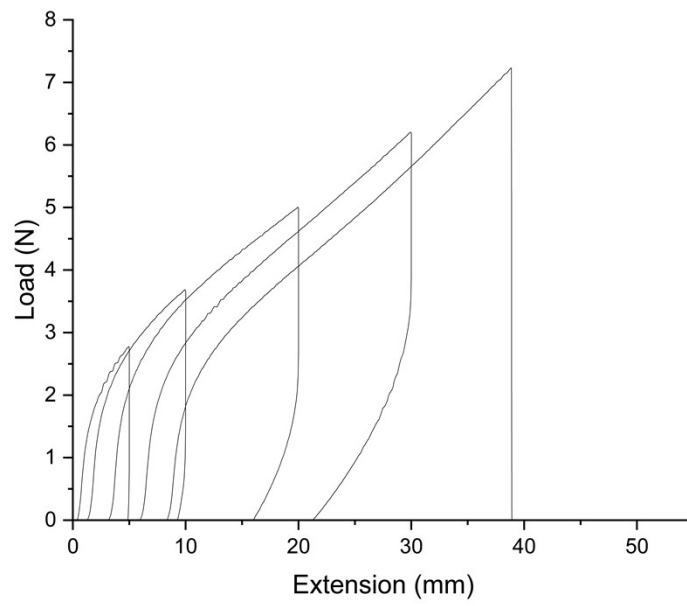


Figure 6: Curves of cyclic mechanical testing run.

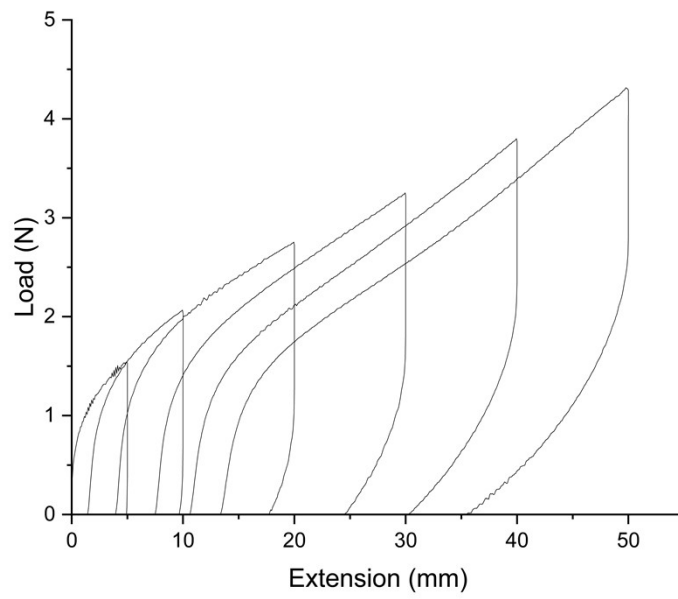


Figure 7: Curves of cyclic mechanical testing run.

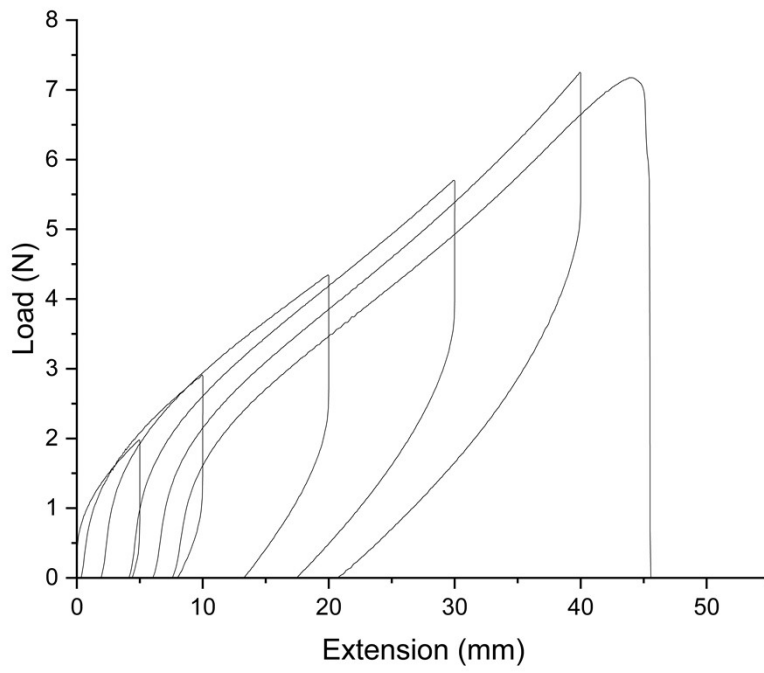


Figure 8: Curves of cyclic mechanical testing run.

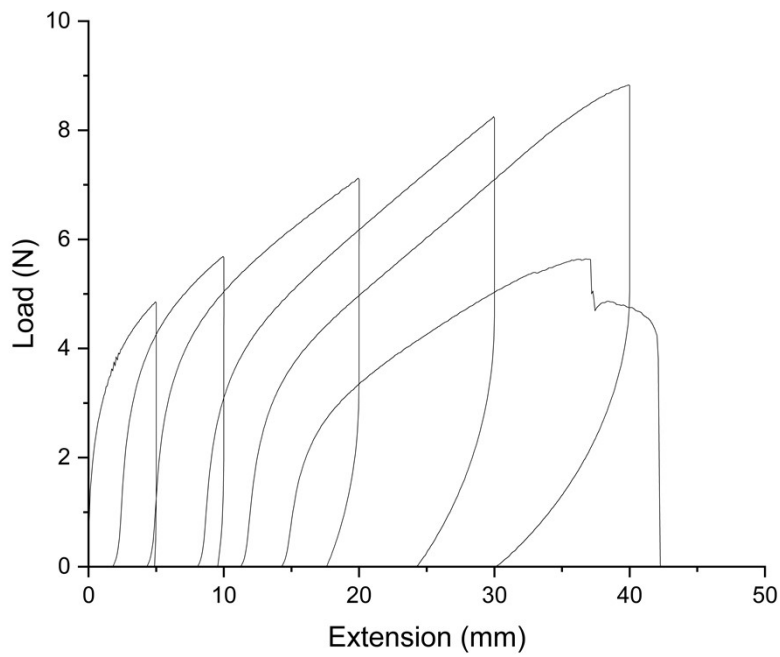


Figure 9: Curves of cyclic mechanical testing run.

Samples used for Shore tests

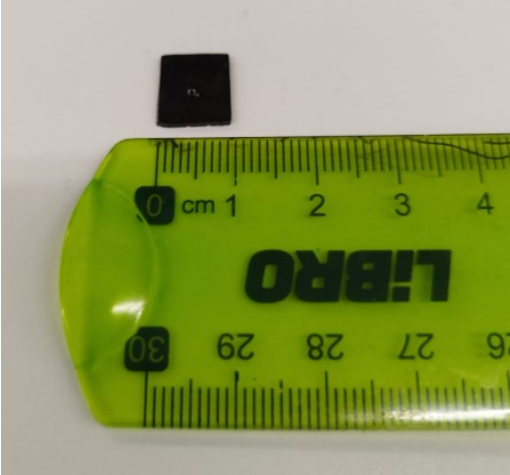


Figure 10: Typical sample used for shore hardness tests.

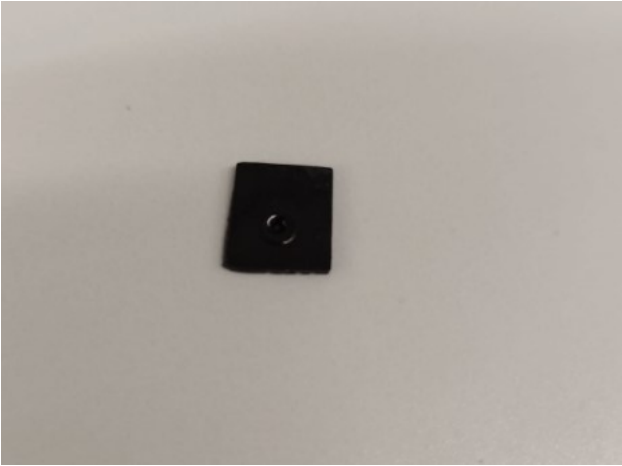
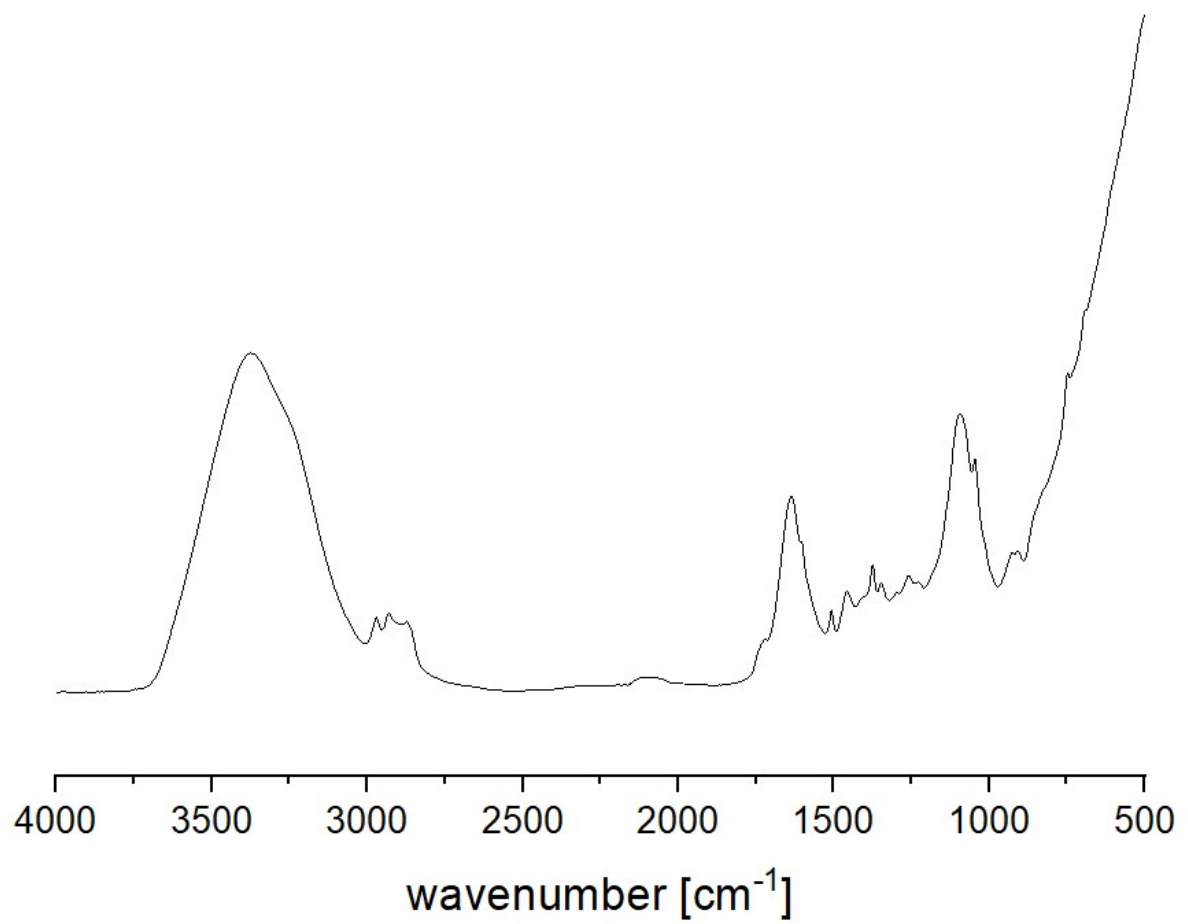


Figure 11: Sample immediately after shore hardness test.

## FT-IR spectrum of recovered hemicellulose



*Figure 12: Infrared spectrum of dry hemicellulose recovered by acetone precipitation.*