Effect of pretreatment severity on the cellulose and lignin isolated from Salix using IonoSolv pretreatment





Fig. 1. Glucan, hemicellulose (left) and lignin (right) removal for pretreatment at 120 °C with $[N_{2220}][HSO_4]$, a/b = 1.02 and 0.98.



Fig. 2. Glucan, hemicellulose (left) and lignin (right) removal for pretreatment at 150 °C with [N2220][HSO4], a/b = 1.02 and 0.98.



Fig. 3. Glucan, hemicellulose (left) and lignin (right) removal for pretreatment at 170 °C with [N2220][HSO4], a/b = 1.02 and 0.98.





8.0 7.8 7.6 7.4 7.2 7.0 6.8 6.6 6.4 6.2 6.0 5.8 5.6 5.4 5.2 5.0 4.8 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 f2 (ppm)

Fig. 4. HSQC spectra of lignin isolated after pretreatment at 120 °C.



Fig. 5. HSQC spectra of lignin isolated after pretreatment at 150 °C.



8.0 7.8 7.6 7.4 7.2 7.0 6.8 6.6 6.4 6.2 6.0 5.8 5.6 5.4 5.2 5.0 4.8 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 f2 (ppm)

Fig. 6. HSQC spectra of lignin isolated after pretreatment at 170 °C.



Fig. 7. GPC data of lignin isolated after pretreatment at 150 °C.