

**Additional file 1**

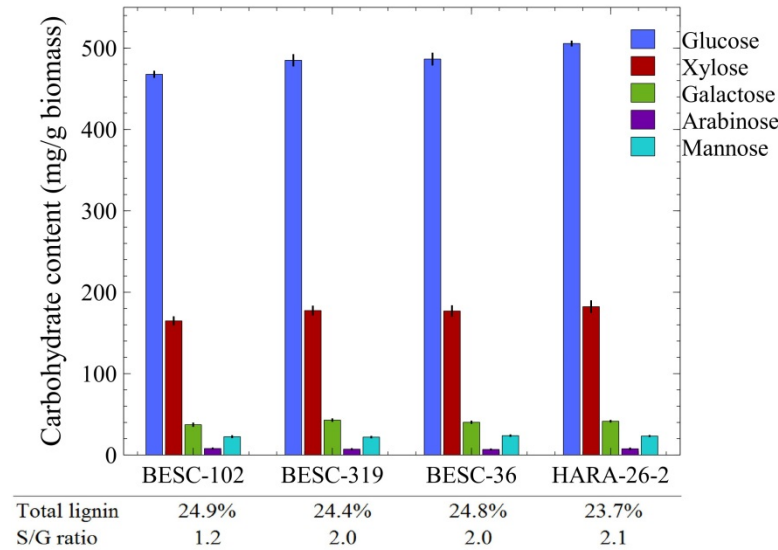


Figure A. 1. Selected *Populus* with comparable carbohydrate and total lignin content; three individuals had similar S/G ratios while a fourth had the lowest possible S/G ratio composition

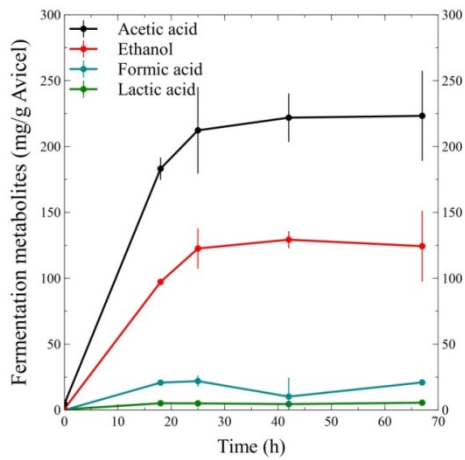


Figure A. 2. Control consolidated bioprocessing of 10g/L glucan (Avicel) showed near complete solubilization within 24 hours and normal fermentation metabolite output

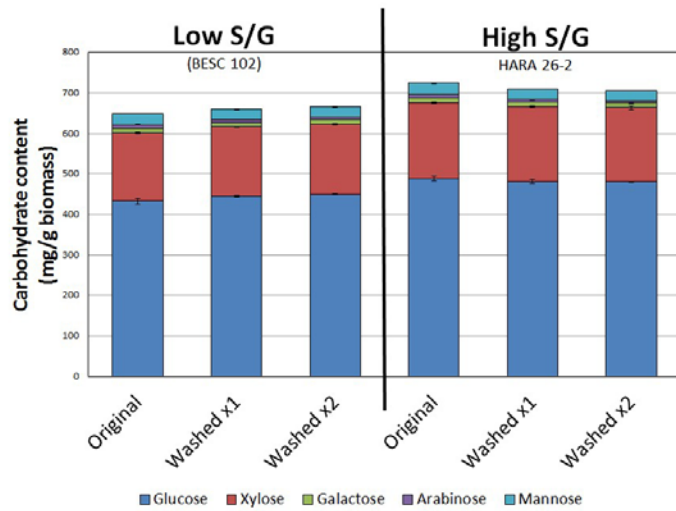


Figure A. 3. Carbohydrate content does not change significantly in *Populus* biomass after one or two wash cleaning cycles

	Total lignin (%)	S/G ratio
<b>Low S/G</b>		
Original	25	1.1
Washed x1	19	1.2
Washed x2	18	1.2
<b>High S/G</b>		
Original	24	1.9
Washed x1	17	2.1
Washed x2	16	2.1

Figure A. 4. Total lignin content decreases after the first wash cycle and no significant change with subsequent washes; the lignin S/G ratio increases very slightly in both *Populus* samples