

Yield of thioacidolysis-released monomers in WT, *Atcad cd* and complemented lines.

Experiment	Sample	Thioacidolysis monomers from β -O-4 linked H, G and S conventional lignin units ^a				Thioacidolysis indene monomers from C6C3 aldehydes linked at C β by β -O-4 bonds ^a		
		H	G	S	S/G	G indene	S indene	
Experiment 1	<i>WT1</i>	0.55 (0.01)	95.2 (0.16)	32.2 (0.01)	0.34 (0.00)	0.09 (0.01)	0.07 (0.00)	
	<i>WT2</i>	0.57 (0.02)	84.4 (0.02)	30.0 (0.06)	0.36 (0.00)	0.02 (0.01)	0.06 (0.01)	
	<i>Atcad cd 1</i>	tr	3.41 (0.07)	0.30 (0.02)	0.09 (0.00)	1.74 (0.17)	1.41 (0.10)	
	<i>Atcad cd 2</i>	tr	3.48 (0.20)	0.31 (0.01)	0.09 (0.00)	1.47 (0.07)	1.35 (0.06)	
	<i>ChimPdCAD 1</i>	0.55 (0.00)	100.5 (4.8)	37.3 (1.8)	0.37 (0.00)	0.08 (0.01)	0.43 (0.04)	
	<i>ChimPdCAD 2</i>	0.60 (0.02)	130.3 (3.0)	53.2 (2.5)	0.41 (0.01)	0.13 (0.00)	0.47 (0.02)	
	<i>ChimAtCAD D 1</i>	0.42 (0.00)	77.5 (1.0)	28.7 (0.2)	0.37 (0.00)	0.10 (0.01)	0.47 (0.01)	
	<i>ChimAtCAD D 2</i>	0.42 (0.03)	65.1 (2.4)	23.6 (0.6)	0.36 (0.00)	0.10 (0.04)	0.21 (0.00)	
	<i>ChimAtCAD C 1</i>	0.18 (0.02)	80.6 (7.0)	21.4 (2.0)	0.27 (0.00)	0.64 (0.04)	1.95 (0.22)	
	<i>ChimAtCAD C 2</i>	0.29 (0.01)	110.3 (3.3)	31.8 (0.9)	0.29 (0.00)	0.30 (0.3)	1.32 (0.24)	
	<i>ChimPaCAD 1</i>	0.37 (0.03)	83.7 (0.03)	17.6 (0.4)	0.21 (0.00)	0.20 (0.03)	1.45 (0.08)	
	<i>ChimPaCAD 2</i>	0.73 (0.03)	105.2 (1.7)	23.1 (0.5)	0.22 (0.00)	0.32 (0.01)	2.00 (0.06)	
	Experiment 2	<i>WT1</i>	1 (0.01)	152.7 (3.5)	53.1 (0.7)	0.32 (0.01)	0.06 (0.01)	0.08 (0.00)
		<i>WT2</i>	1.1 (0.01)	135.3 (6.6)	49.1 (4.4)	0.36 (0.01)	0.06 (0.02)	0.08 (0.04)
<i>Atcad cd 1</i>		0.2 (0.1)	11.7 (1.8)	0.6 (0.0)	0.05 (0.01)	4.5 (0.8)	3.3 (0.7)	
<i>Atcad cd 2</i>		0.1 (0.1)	11.2 (0.3)	0.7 (0.10)	0.06 (0.00)	3.7 (0.01)	2.6 (0.6)	
<i>ChimPttSAD1 1</i>		0.22 (0.01)	29.9 (0.63)	9.6 (0.03)	0.32 (0.01)	2.32 (0.10)	2.45 (0.12)	
<i>ChimPttSAD1 2</i>		0.17 (0.00)	27.7 (0.8)	9.4 (0.4)	0.34 (0.00)	2.82 (0.06)	3.02 (0.03)	

^a Yield in main lignin-derived thioacidolysis monomers (expressed in μ moles per gram of Klason lignin) recovered from conventional H, G or S β -O-4 linked lignin units or from coniferaldehyde or sinapaldehyde linked at C β by β -O-4 bonds. SD from 2 repetitions are in bracket.