

Table S5. Functional characterization of monoterpene synthases from A) lodgepole pine and B) jack pine. Products representing more than 5% of the total amount of monoterpenes produced by the enzyme are listed as percent of total product +/- SE.

A) Lodgepole pine

	% of total products												
	tricyclene	(+)- α -pinene	(-)- α -pinene	(-)-camphene	(-)- β -pinene	(-)-sabinene	(+)-3-carene	(-)- α -phellandrene	myrcene	(-)- β -phellandrene	1,8-cineole	terpinolene	(-)- α -terpineol
PcTPS-(+) α pin1		88.2 \pm 0.48											
PcTPS-(-) α pin1			76.6 \pm 2.2		9.88 \pm 1.8								
PcTPS-(-) β pin1			9.03 \pm 0.05		79.0 \pm 0.16								
PcTPS-(+) 3car1							67.6 \pm 0.89					12.5 \pm 0.14	5.73 \pm 0.42
PcTPS-(-) β phell1							5.14 \pm 0.08			87.5 \pm 0.27			
PcTPS-(-) β phell2										81.8 \pm 0.30			
PcTPS-(-)camp/ (+) α pin1	6.78 \pm 0.04	26.2 \pm 0.13	17.9 \pm 0.09	29.1 \pm 0.13	7.89 \pm 0.04				5.01 \pm 0.04				
PcTPS- α terp/1,8cin						8.58 \pm 0.20			8.06 \pm 0.15		32.4 \pm 0.34		36.8 \pm 0.20

B) Jack pine

	% of total products										
	(+)- α -pinene	(-)- α -pinene	(-)- β -pinene	(+)-3-carene	(-)-limonene	(-)- β -phellandrene	terpinolene	terpin-4-ol	(+)- α -terpineol	(-)- α -terpineol	geraniol
PbTPS-(+) α pin1	91.7 \pm 0.48										
PbTPS-(-) α pin1		77.9 \pm 0.17	9.62 \pm 0.15								
PbTPS-(-) β pin1		8.42 \pm 0.16	80.6 \pm 0.22								
PbTPS-(-) β pin2		13.1 \pm 0.13	75.2 \pm 0.18								
PbTPS-(+) β car1				55.6 \pm 3.5			20.8 \pm 1.4		5.30 \pm 2.0	7.26 \pm 2.8	
PbTPS-(+) β car2				69.6 \pm 0.31			6.81 \pm 0.23			6.86 \pm 0.13	
PbTPS-(-) β phell1						85.9 \pm 0.14					
PbTPS-(-) α / β pin1		39.4 \pm 0.99	33.5 \pm 0.65								
PbTPS- α terp					5.26 \pm 0.13		9.2 \pm 0.20	17.3 \pm 0.35	14.5 \pm 0.64	18.1 \pm 0.80	9.96 \pm 0.74