

# Overview of Larch as a Fiber Resource

## Eastern Larch

Tree Dimensions: 50-75' tall 14-20" in diameter

Present in boreal forest swamps

Density:	Green:	753 kg/m <sup>3</sup>
	Air-dry:	593

% Lignin:	26.2
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% Holocellulose:	65.4
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% alpha cellulose:	44.4
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Ash:	0.3
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# Hybrid Larch Fiber Morphology

Fiber Length:

Arithmetic mean 0.87/mm

Length weighted mean: 2.24/mm

Weight weighted mea: 2.91

Diameter:

Spring wood 58/ $\mu\text{m}$

Summer wood 29/ $\mu\text{m}$

Thickness:

Spring wood 2.78/ $\mu\text{m}$

Summer wood 5.67/ $\mu\text{m}$

Coarseness:

0.327/ mg/m

# European Larch as a Fiber Resource

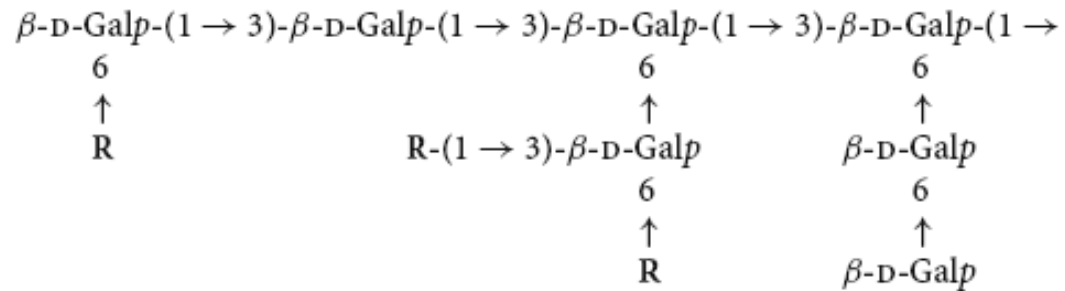
## Water Sugars Soluble (mg sugar/gr wood)

	Arab.	Xyl	Gal	Glc	Man	Rha	GlcA	GalA	MeGlcA
Sap	0.3	0.1	2.2	8.9	1.4	0.1	0.1	0.5	0.1
Heart	12.3	1.1	86.3	0.7	1.3	.2	1.0	.5	0.7

## Wood Sugars (mg sugar/gr wood)

Sap	12.8	33.5	20.2	56.1	113	1.6	5.1	12.5	6.8
Heart	20.0	41.4	82.2	44.8	105	1.8	4.8	11.5	8.4

# Larch Hemicellulose



R: H or  $\beta\text{-D-Galp(1}\rightarrow$   
 or  $\alpha\text{-L-Araf-(1}\rightarrow$   
 or  $\beta\text{-L-Arap-(1}\rightarrow\text{3)-}\alpha\text{-L-Araf-(1}\rightarrow$ )