

anat & morph

stature or vigor

stress

biochemical

growth and deve

List from Andrew

lignin S:G ratio

Klason lignin

lignin degree of polymerization

acid soluble lignin (% dry weight)

acid insoluble lignin (% dry weight)

alpha-cellulose

holocellulose

wall thickness

Soda and Soda Anthraquinone (AQ) pulping

Kraft and Kraft AQ

Heating value is the net enthalpy released upon reacting a material with oxygen under isothermal conditions. If water vapor formed during the reaction condenses at the end of the process, the latent enthalpy of condensation contributes to what is termed the higher heating value (HHV).

Ash content (% dry weight)

some inorganic elements, such as P, K, Ca, and Mg, act as macronutrients and a knowledge of their contents in the biomass can provide information on nutrient depletion of the soil, which can be used to maintain soil fertility in subsequent rotations

For large-scale lignocellulosic biorefinery operations, extractives can be a potential source of value-added coproducts. The compounds present in the extractives fraction are a function of the solvent, which is usually ethanol, acetone, dichloromethane, or a mixture of ethanol/benzene.

Arabinan (% dry weight)

Xylan (% dry weight)

Mannan (% dry weight)

Galactan (% dry weight)

Glucan (% dry weight)

Uronic acid (% dry weight)

Hydroxyl group contents of poplar lignin (mmol/g):
Lignin structural information calculated from
quantitative ^{13}C NMR data

yield

sterility or fert

quality

evil other