Available Tests for Chemical Analysis

Pulp

Carbohydrates, acid hydrolysis followed by HPLC analysis of monosaccaharides
Viscosity
Kappa Number
Acid-Insoluble Lignin (Klason Lignin)
Acid-Insoluble Ash
Acid-Soluble Lignin
Solvent Extractives
Ash Content at 525° C
Ash Content at 900° C
Alpha-, Beta-, Gamma-Cellulose
Carboxyl functional group content
Phenolic hydroxy functional group content
Caustic Solubility, 1% NaOH at 100° C
Caustic Solubility, at 25° C
Metals (acid digestion followed by ICP Emission Spectroscopy)
Na, K, Ca, Fe, Mn, Mg, Al, Cr, Ni, S, P, etc.
Si (caustic fusion followed by ICP Spectroscopy)
Pentosans
Moisture, oven dried at 105° C
pH, cold water extract
pH, hot water extract
Anions, water extractable (chloride, sulfate, etc.)

Wood

Carbohydrates, acid hydrolysis followed by HPLC analysis of monosaccaharides
Acid-Insoluble Lignin (Klason Lignin)
Acid-Insoluble Ash
Acid-Soluble Lignin
Solvent Extractives
Ash Content at 525° C
Ash Content at 900° C
Metals (acid digestion followed by ICP Emission Spectroscopy)
Na, K, Ca, Fe, Mn, Mg, Al, Cr, Ni, S, P, etc.
Si (caustic fusion followed by ICP Spectroscopy)
Pentosans
Moisture, oven dried at 105° C
pH, cold water extract
pH, hot water extract
Anions, water extractable (chloride, sulfate, etc.)

Paper

Acid-Insoluble Ash
Ash Content at 525° C
Ash Content at 900° C
Metals (acid digestion followed by ICP Emission Spectroscopy)
Na, K, Ca, Fe, Mn, Mg, Al, Cr, Ni, S, P, etc.
Si (caustic fusion followed by ICP Spectroscopy)
Moisture, oven dried at 105° C
pH, cold water extract
pH, hot water extract
Anions, water extractable (chloride, sulfate, etc.)
Coating analysis, ID minerals and binder present
Starch
Surface pH
Rosin size determination, qualitative
AKD size determination, qualitative
Resin-formaldehyde wet strength determination, qualitative

All Kraft Liquors

Metals (acid digestion followed by ICP Emission Spectroscopy)
Na, K, Ca, Fe, Mn, Mg, Al, Cr, Ni, S, P, etc.
Si (caustic fusion followed by ICP Spectroscopy)
Density
Active Alkali
Anions (Chloride, Sulfate, Thiosulfate, Sulfite, Oxalate)

Kraft White and Green Liquor

ABC Titration for NaOH, Na2S, and Na2CO3
Total Alkali
Total Suspended Solids

Kraft Black Liquor

BTU Content (i.e., Heating Value, Calorific Value)
Solids Content
Organic Matter
Sulfated Ash
Sodium Sulfide
Crude Tall Oil Content
Anthraquinone
Fiber Content