

ACIRD also provides testing & analytical services to different industries. A list of various testing parameters is given below. **If you have any query about our testing & analytical services, please contact us at email: csc@avantharesearch.org; phone: 01732-292712/ 704.**

TESTING PARAMETERS AVAILABLE

RAW MATERIAL: Acid insolubles; Ash; Bulk density; Cellulose; Proximate chemical analysis; Extractives; Hemicelluloses; Holocellulose; Lignin (Klason); Moisture; Pentosans; Silica; Water & alkali solubility

PULPING, BLEACHING & DEINKING: Pulping & bleaching optimization; Deinking/ enzymatic deinking of waste paper; Evaluation of enzyme for bleaching/ refining/ drainage improvement; Oxygen delignification; Refining behaviour of pulps and properties of paper; Study of process chemicals

PULP: Acid insolubles; Alkali solubility; Alpha cellulose; Ash; Bauer McNett fibre classification; Calcium; CED viscosity; COD carryover; Dirt, specks & EBA; Dissolved charge; Drainage rate; Fibre morphology; Fibre length index (FLI); Freeness ($^{\circ}$ SR & CSF); Hexenuronic acid; Iron; K. no.; Kappa No.; Lignin; Moisture; Pentosans; Rayon grade pulp analysis; Shives analysis; Silica; Soda Loss; Water retention value; Zeta potential

WET-END: Alkaline sizing (ASA & AKD); Dissolved charge; Filler retention studies; Handsheet preparation and testing; Refining behaviour of pulp w.r.t. freeness, energy & physical properties; Wet-end chemical evaluation and optimization; Zeta potential

PAPER COATING: Application of coating color on paper; Brookfield viscosity; Coated paper properties; Dispersion demand; Immobilization solids; pH; Surface tension; Water retention value (Static & Dynamic)

PAPER: Air permeability/ porosity; Ash; Brightness; Bursting strength; Castor oil penetration; Cobb₆₀; Coefficient of friction (Static & dynamic); Dirt, specks and EBA; Dynamic contact angle (Sizing test); Electrical surface resistivity; ERIC value; Fluff testing; Fluorescence; Folding endurance; Formation index; Gloss; Grammage; IGT pick velocity; Ink rub value; Klemm absorbency; MICR characterization; Moisture; No. of ply in board; Opacity, scattering coefficient; P.C. Number; pH; PPS roughness; Pre-print curl; Print density; Rosin content; Scott bond; Smoothness; Starch content; Stiffness; Surface resistivity; Taber abrasion resistance; Tearing strength; Tensile energy absorption; Tensile strength, breaking length; Thickness; Water absorbency of bibulous paper; Water soluble sulphates; Wax content; Wax pick strength; Wet rub value; Whiteness; Yellowness; Colour coordinates: L*, a* and b*; Z-D tensile strength

BLACK LIQUOR: Acid insolubles; Brookfield viscosity; Chlorides; CHN analysis; Conductivity; Gross calorific value; Lignin; Metals; Organic acids; pH; R₂O₃; Residual active alkali; Silica (SiO₂); Specific density; Sulphated ash; Sulphates; Sulphur; Sulphur in smelt; Swelling volume ratio; Total alkali; Total solids

WATER AND WASTEWATER: Acidity; Alkalinity; BOD; Chloride; Chlorine; COD; Colour; Conductivity; Cyanide; Dissolved oxygen; Fluoride; Hardness; Metals; MLSS; MLVSS; MPN; E. Coli; Total bacterial count; Nitrate; Nitrogen (Ammonical and Kjeldahl); Odour; Oil & grease; Organic halogen (Adsorbable (AOX), Extractable (EOX), Purgeable (POX)); pH; Phenolics; Phosphate; SAR; Silica; Sludge volume index; Sulphates; Temperature; Total carbon; Total dissolved/ suspended/ volatile solid; Total inorganic/ organic carbon; Toxicity assay; Turbidity

SOLID WASTE: AOX; Ash/organic matter; Calorific value; Carbon; Metals; Moisture; Nitrogen (Kjeldahl); pH; Phosphorous; Sulphur; Volatile & non-volatile matter

ENZYMES: Enzyme activities viz., alpha amylase, cellulase, esterase, laccase, lipase, pectinase, xylanase; pH and temperature profile

MICROSCOPIC ANALYSIS: Image analysis; Mechanical pulp content in paper; Qualitative and quantitative fibre furnish analysis

COAL: Gross calorific value; Proximate analysis including CHNS

LIME SLUDGE: Acid insolubles; Calcium carbonate; Loss on ignition; Magnesium as MgO; Moisture; R₂O₃; Residual alkali as Na₂O; Residual CaO; Silica as SiO₂

AIR: Acid mist; CO; CO₂; H₂S; Metals; NH₃; Noise; NO_x; O₂; SO_x; SPM; Temperature; Velocity

INSTRUMENTAL ANALYSIS: AOX analyser (AOX, EOX, POX); Brightness tester (Brightness, whiteness, opacity, color coordinates); Einlehner abrasion tester (Abrasion of filler/pigment); Gas chromatograph; Image analyser (Micrographs at different resolutions); Laser scattering particle size distribution analysis (Particle size distribution of filler, pigment, paint, emulsion, ink, etc.); Particle charge detector (Dissolved colloidal charge); TOC analyser; UV-VIS spectrometer; Zeta potential meter, Brookfield viscometer; Surface tension meter; Water retention (Static & Dynamic) meter