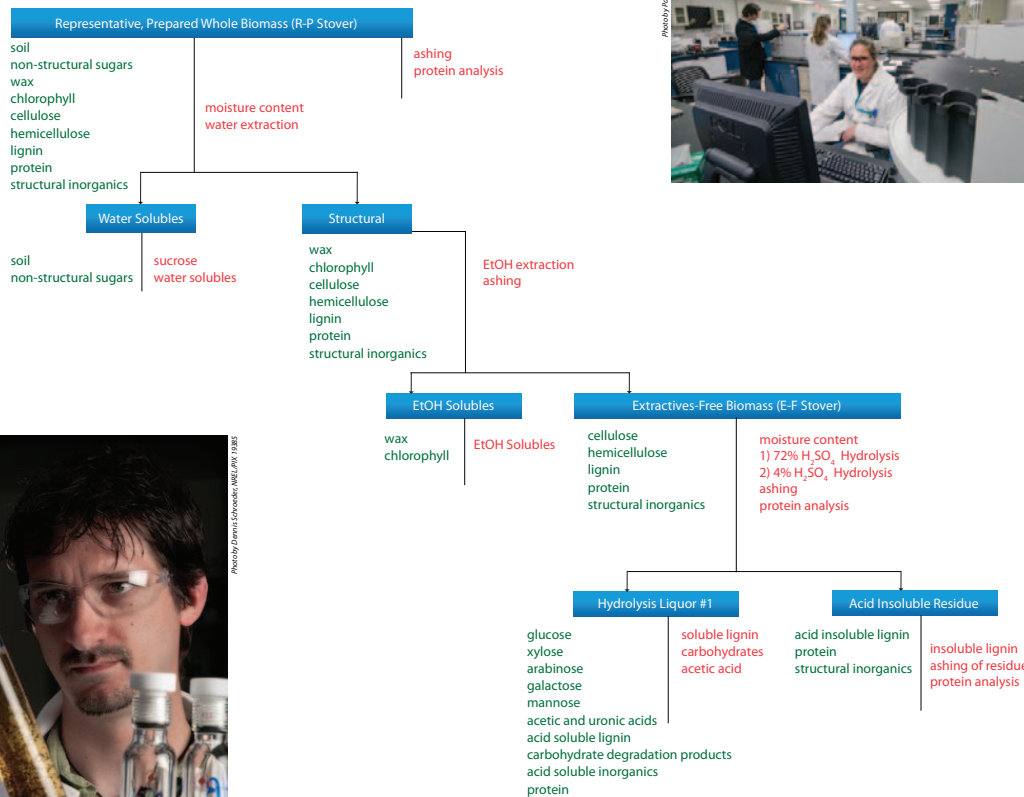


Compositional Analysis Laboratory

Determining the chemical composition of biomass feedstocks, intermediates, and products

Flow Chart of Feedstock Analysis



Three specialized laboratories staffed by a team of experienced scientists

- Provide customized analytical method development for a wide variety of feedstocks and process intermediates
- Derive comprehensive biomass analysis results backed by 20 years of experience supporting the biomass conversion industry
- Write publicly available Laboratory Analytical Procedures, several of which have been adapted by ASTM International and used and referenced worldwide
- Provide training classes on biomass analysis and method development to help companies and institutions rapidly improve their analytical results

Compositional analysis procedures

- For analyzing solid samples to measure structural carbohydrates (glucose, xylose, galactose, arabinose, and mannose), lignin, extractable materials, protein, and ash
- For analyzing liquid samples to measure oligomeric and monomeric carbohydrates, lignin, and byproducts including organic acids and sugar degradation products

Rapid analysis methods

- Near infrared spectroscopy coupled with multivariate statistics to produce calibration models for several different biomass types including feedstocks and pretreated materials
- Models dramatically decrease the time required for and cost of routine compositional analysis
- Customized with clients for specific applications