

LIMS and Web Integration

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Analytical Chemical Laboratories operate to analyze various sample types, anything from soil, water, sludge, serum, blood, urine and other types and then to report results to those that submitted the samples. Once the samples are received in the laboratory they are logged into the Laboratory Information Management System (LIMS) and then they are assigned a unique identifier, tracked, analyzed, linked to QC data, validated and approved prior to reporting (either hard copy or electronic). Reports are typically sent out to clients via fax or a hard copy in the mail. For those requiring results faster, almost in real time the Internet has been a great tool. The Internet allows the LIMS to utilize an automated task to send e-mail notification that results are available for review. Once the laboratory analyses are complete, an e-mail can be configured to send notification that results and reports are available on a secure web site for download or the reports in pdf format are attached and can be reviewed and printed. In addition to cost benefits for expedited reporting (as in the case of site remediation, in which layers of earth are analyzed for contaminants involving costly heavy equipment) to public health notifications (which may result in the prevention additional individuals from being infected or the early quarantine of infected individuals). Due to the private nature of most test result data, it is critical that the System Administrator has appropriate security in place to ensure that data is transmitted in an encrypted format so that it cannot be intercepted and that the network security is in place to prevent external attacks. This presentation will focus on best practices and utilization of current technology.