



Streamlining Quality Management with CC+I's Lab Data Management System

LDMS

Computer Control + Integration, Inc.

Beverage Suite

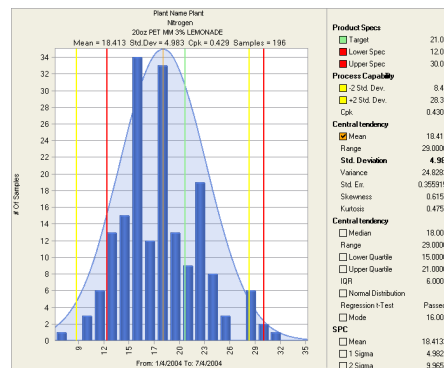
Key Benefits:

- Complete data analyses for all quality functions
- Electronic traceability of product at all stages of production
- Alerts For Out Of Specification Test Results
- Training costs lowered - Easy to use with little operator training
- Automatic data collection
- SPC Analyses for all key metrics
- Historical Data Available For Reporting And Performance Analyses
- Complete Management Information Software
- Pinpoint Problem Equipment, Products, And Operator Practices
- Management By Exception
- Control calibrations and certifications for test equipment
- Tracking for nonconforming product
- Centralize critical documentation at each facility

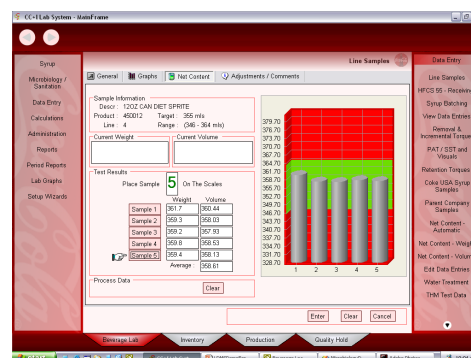
CC+I's Lab Data Management System (LDMS) – Moving Quality From The Lab Into The Production Workplace

In any soft drink bottling company, one of the keys to making top-notch products in the manufacturing process is constant attention to quality. While many of the tests performed to assure this quality require dedicated instruments typically located in a testing lab, today's trend is to move the whole process of information gathering, decision making, calculation, review, and release out into the workplace, and not strictly confined to the laboratory environment. The goal is to create a seamless organization where everyone involved in the process has access to the data and analysis tools required to make sound decisions that directly affect quality.

The Lab Data Management System (LDMS) developed by CC+I provides this functionality in a software platform that was designed from the ground up to specifically meet the needs of the total quality aspects of beverage production, particularly CSD, Water, and Hot Fill beverage products. Compared to other software solutions that provide general purpose data entry along with basic reporting and statistical functions, LDMS is a customized application, using the terminology and calculations specific to this industry. The multiuser, network based software allows the customer to locate PC based workstations in the beverage lab, the syrup lab, on production lines, and on management's desktops. Utilizing a centralized enterprise database, everyone in the process has immediate access to both real time and historical quality related data.



SPC Analyses Provides Ability to Track Historical Performance.



Automatic Net Content Data Entry

System Highlights

Improving Quality on the Production Floor

- Complete and customized system provides lab technicians screens for data entry and reporting for all quality functions
- Lab personnel perform calculations, documentation, and review results using online information
- Multi-user design allows any authorized user access to the centralized data repository from any PC located on the network
- Customized screens, developed for the Beverage Industry, provide users with a simple method for entering test results
- Statistical tools allow users to quickly pinpoint leading reasons for off-quality, understand process variation, and determine optimal machine settings

User Friendly System

- Easy to use requiring little operator training
- Flexible in terms of configuring workstations and product specifications
- Easily accommodates the seamless inclusion of newly developed software modules
- Built-in calculations are available for most often used formulations
- System provides extensive Data Integrity Logic with user alerts for "Out Of Specification" test results
- Simple to use setup forms provide user interface to incorporate new product SKU's

Complete Lab Information Management Software

Complete System

- Designed for all phases of laboratory management in a beverage plant, including data analysis for CSD's, Water, and Hot Fill processes

Track component usage

- Traceability of raw materials, syrup batches, and finished product at all stages of production

SPC Analyses for Key Metrics

- SPC analyses for CO2, Brix, Assay, Nitrogen, Torques, Net Content, etc.
- Numerical descriptors include calculation of Mean, Standard Deviation, Cp, Cpk, and Z-Values

Alerts for Potential Out of Spec Products

- Screen for potential out-of-spec product based on high and low limits for the most frequently used product variables

Efficiency Improvements

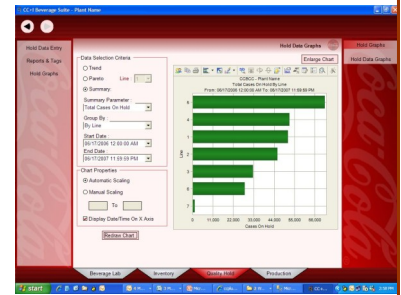
- Context sensitive data entry forms are designed to retrieve the repetitive fields from the previous test, speeding data entry for cyclical testing.
- Calculation fields are incorporated into data entry screens, allowing the user to enter the physical test parameters for a specific field

Automatic Data Collection

- Device drivers provided for equipment capable of automatic data transfer

View and Print Reports for Any Time Period

- Line Checks
- Syrup Batching
- Net Contents
- Removal/Incremental Torque
- Lab Equipment Calibration
- Microbiology and Sanitation
- Water Treatment
- Raw material Receipts, Inventory, and Testing
- View Concentrate Inventory Costs by component based on cost per unit
- Yield Reporting based on Actual Inventory / Usage
- Filtering report data by operator id, shift, package, flavor, etc.



Pareto Analysis used to identify top causes for Non-Conforming Product

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Systems with Value, Plus.



Computer Control + Integration, Inc. (CC+I, Inc.) was founded by a group of design engineers and top management personnel charged with the responsibility of designing, developing and successfully implementing computer integrated manufacturing systems used internally throughout a large multibillion dollar manufacturing corporation. In July 1988, this group formed a private company and began applying this same factory floor automation and management information systems experience to different manufacturing sectors, in particular the food and beverage industry.

For more information about systems that CC+I has developed and implemented for the beverage industry, call us today at 864-458-7587.

www.ccplusi.com