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Implementation of a Laboratory Information Management System To Manage Genomic Samples

[Witty, Derick](#)



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Abstract:

A Laboratory Information Management Systems (LIMS) is designed to manage laboratory processes and data. It has the ability to extend the core functionality of the LIMS through configuration tools and add-on modules to support the implementation of complex laboratory workflows. The purpose of this project is to demonstrate how laboratory data and

processes from a complex workflow can be implemented using a LIMS. Genomic samples have become an important part of the drug development process due to advances in molecular testing technology. This technology evaluates genomic material for disease markers and provides efficient, cost-effective, and accurate results for a growing number of clinical indications. The preparation of the genomic samples for evaluation requires a complex laboratory process called the precision aliquotting workflow. The precision aliquotting workflow processes genomic samples into precisely created aliquots for analysis. The workflow is defined by a set of aliquotting scheme attributes that are executed based on scheme specific rules logic. The aliquotting scheme defines the attributes of each aliquot based on the achieved sample recovery of the genomic sample. The scheme rules logic executes the creation of the aliquots based on the scheme definitions. LabWare LIMS is a Windows® based open architecture system that manages laboratory data and workflow processes. A LabWare LIMS model was developed to implement the precision aliquotting workflow using a combination of core functionality and configured code.

Description:

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