← Back to Biotech BIOTECH · WORKFLOW

Quality control testing workflows

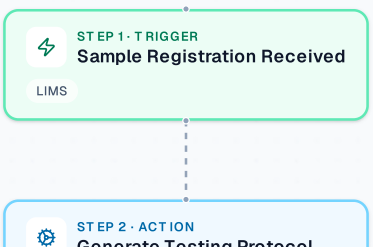
Automates quality control testing workflows for biotech samples by coordinating sample processing, executing analytical tests, and generating compliance reports. Ensures consistent quality standards and accelerates product release decisions.

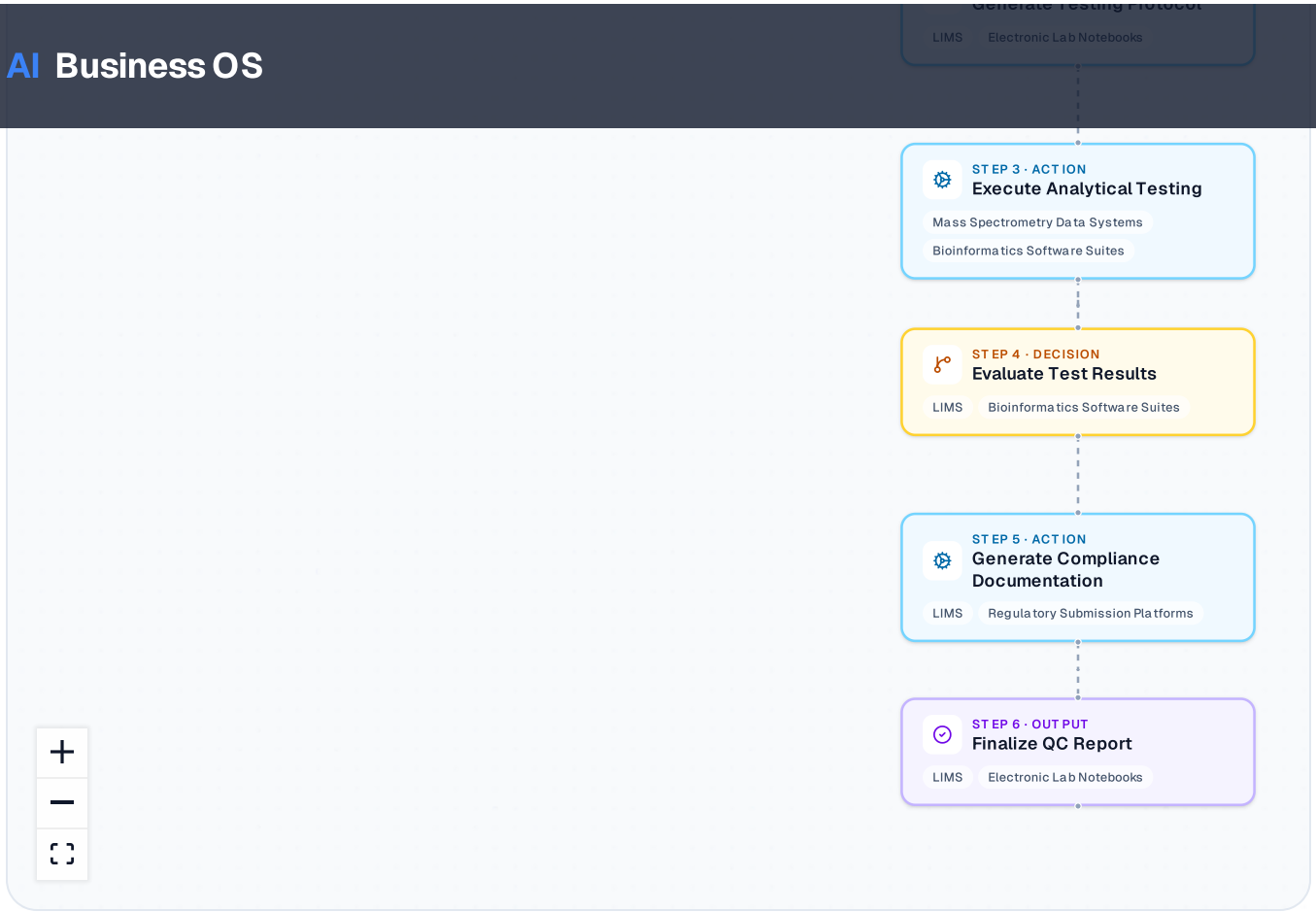
Download PDF | Get Your Blueprint

WORKFLOW TRIGGER
New batch sample is registered in LIMS for quality control testing

Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

TRIGGER

Sample Registration Received

A new batch sample is logged into the LIMS system with associated metadata and testing requirements. The system extracts sample ID, batch information, and required QC test protocols.

LIMS

2

ACTION

Generate Testing Protocol

Automatically creates standardized testing protocols based on sample type and regulatory requirements. Updates Electronic Lab Notebook with testing procedures and acceptance criteria.

LIMS | Electronic Lab Notebooks

3

ACTION

Execute Analytical Testing

Initiates automated analytical testing using mass spectrometry and other instruments. Raw data is captured and transferred to bioinformatics software for processing.

Mass Spectrometry Data Systems | Bioinformatics Software Suites

4

DECISION

Evaluate Test Results

Compares analytical results against predefined acceptance criteria and specifications. Routes samples that fail criteria to investigation workflow or approves compliant samples for release.

LIMS Bioinformatics Software Suites

5

ACTION

Generate Compliance Documentation

Creates certificates of analysis, batch records, and regulatory compliance reports. Formats documentation according to FDA and international regulatory standards.

LIMS Regulatory Submission Platforms

6

OUTPUT

Finalize QC Report

Delivers completed quality control report with pass/fail status, analytical data, and compliance documentation. Updates batch status in LIMS for production release decision.

LIMS Electronic Lab Notebooks

Outputs

- Certificate of Analysis
- QC Test Report
- Batch Release Status

- Regulatory Compliance Documentation

Key Metrics

- Testing Cycle Time
- First-Pass Success Rate
- Compliance Report Accuracy

Tools & Integrations

- LIMS
- Electronic Lab Notebooks
- Mass Spectrometry Data Systems
- Bioinformatics Software Suites
- Regulatory Submission Platforms

AI Business OS

Actionable AI implementation strategies for business leaders ready to transform their operations.

COMPANY

About

Industries

RESOURCES

Articles

CONNECT

MVP.dev

LinkedIn