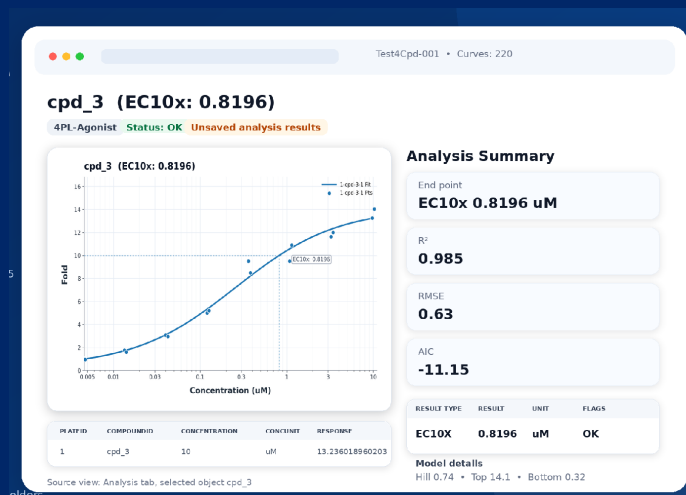


EmpowerlyticsIQ

Dose-Response Curve Application White Paper

A configurable, metadata-aware platform for dose-response analysis, analytical continuity, and controlled scientific workflows.

Fit curves
Review outliers & QC
Retrieve prior analyses



Prepared for evaluation, stakeholder review, and platform qualification discussions

For scientific, technical, and commercial stakeholders

What We'll Cover

A structured guide to how EmpowerlyticsIQ supports dose-response analysis, analytical continuity, and controlled scientific workflows.

01	Executive Summary	How EIQ can help scientific and technical buyers
02	Why Dose-Response Work Needs a Platform	The operational cost of fragmented analysis
03	Solution Overview	Analytical workflow + metadata + governance
04	Scientific Buyer Value	Continuity, context-rich retrieval, standardization
05	Technical Buyer Value	Architecture, roles, extensibility, compliance direction
06	Core Capabilities	Workflow support, history, metadata, user management
07	Access Control & Governance	Roles, controls, data integrity direction
08	Evaluation, Use Cases & Roadmap	How buyers should assess fit and future value

Executive Summary

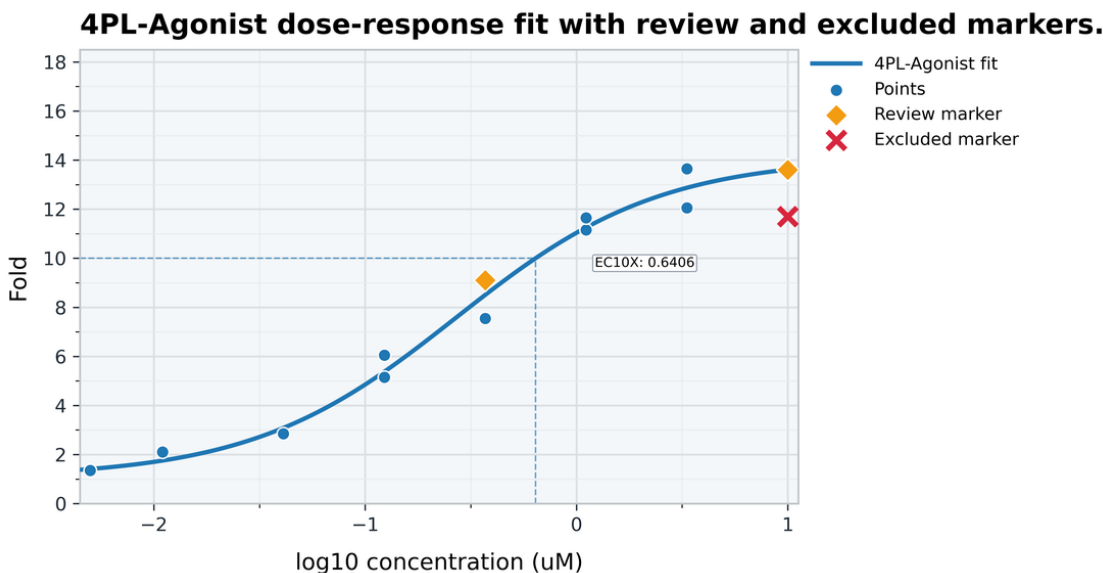
EIQ consolidates dose-response analytics, searchable history, metadata governance, and access control into one application.

The EmpowerlyticsIQ (EIQ) Dose-Response Curve Application is a web-based analytical platform designed for organizations seeking a more organized, scalable, and technically defensible way to conduct dose-response analysis. It is built for scientific and technical teams seeking solutions for assay analytics, experiment tracking, metadata management, and controlled workflows.

In many laboratories and research settings, dose-response work is still spread across spreadsheets, local scripts, analyst-specific routines, and separate metadata files. This approach can work for small teams or early-stage projects, but as workload grows and the need for repeatability, traceability, and oversight increases, it becomes costly and inefficient.

EIQ addresses these problems by bringing dose-response analysis, structured metadata, searchable analysis history, role-based access, and administrative tools together in one application. It removes the need for scattered systems while preserving analytical flexibility scientists need for real-world work, and it establishes a foundation for stronger data integrity and governance.

The result is both immediate and lasting value: more efficient, consistent, and reproducible dose-response work today, and a controlled platform that supports future integrations, stronger oversight, and rising quality expectations over time.



Example visualization: dose-response fit with review markers and outlier indicators.

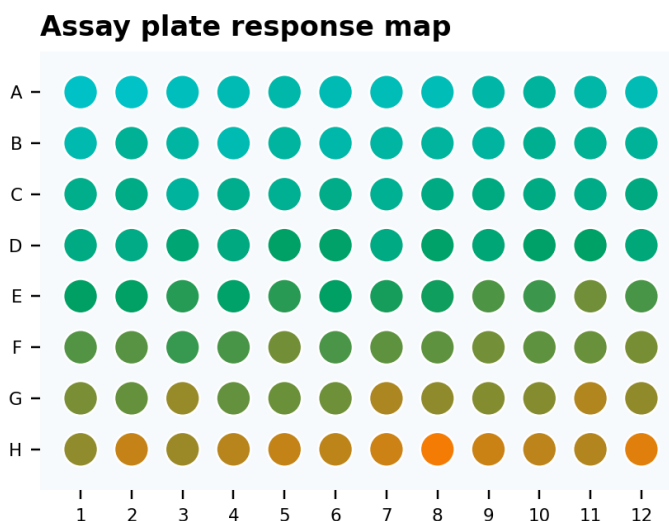
Practical value Improves efficiency, consistency, recoverability, and analytical continuity for recurring dose-response work.	Strategic value Creates a foundation for future integration, stronger oversight, and broader quality expectations.
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Why This Problem Matters

Dose-response analysis is central to scientific decision-making in discovery, translational research, assay development, and compound profiling.

Teams rely on dose-response data to assess potency, efficacy, selectivity, and assay behavior across experiments, targets, compounds, and models. However, this work is often hindered by fragmented and hard-to-manage tools:

- Results are generated using a mix of spreadsheets and local scripts.
- Metadata is not always captured consistently, and sometimes it falls outside the main analytical workflow.
- Historical data is hard to locate, and analysts have trouble reproducing each other's work.
- Outlier handling and data review are not applied consistently across analysts.
- Role-based controls are limited, and the system is difficult to maintain from an administrative perspective.



Example visualization: assay plate response map for experiment review.

For buyers evaluating analytical infrastructure, these issues significantly affect throughput, consistency, scientific confidence, and the platform's ability to scale beyond a single analyst or small team.

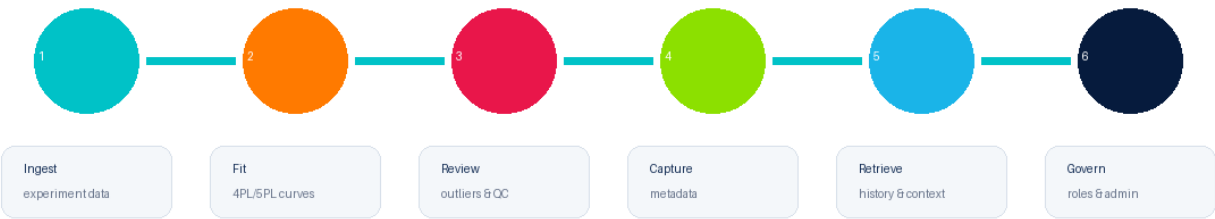
Buyer Problem Statement

Scientific and technical buyers need more than a curve-fitting screen.

They require a system that supports the full dose-response analysis lifecycle, including data import, curve fitting and interpretation, metadata recording, retrieval of previous analyses, user and permission management, controlled data entry, and traceability.

Solution Overview

EIQ is a web-based dose-response analysis application with scientific and administrative features. It enables organizations to standardize workflows while allowing field structures, user roles, and configuration settings to evolve as needs change.



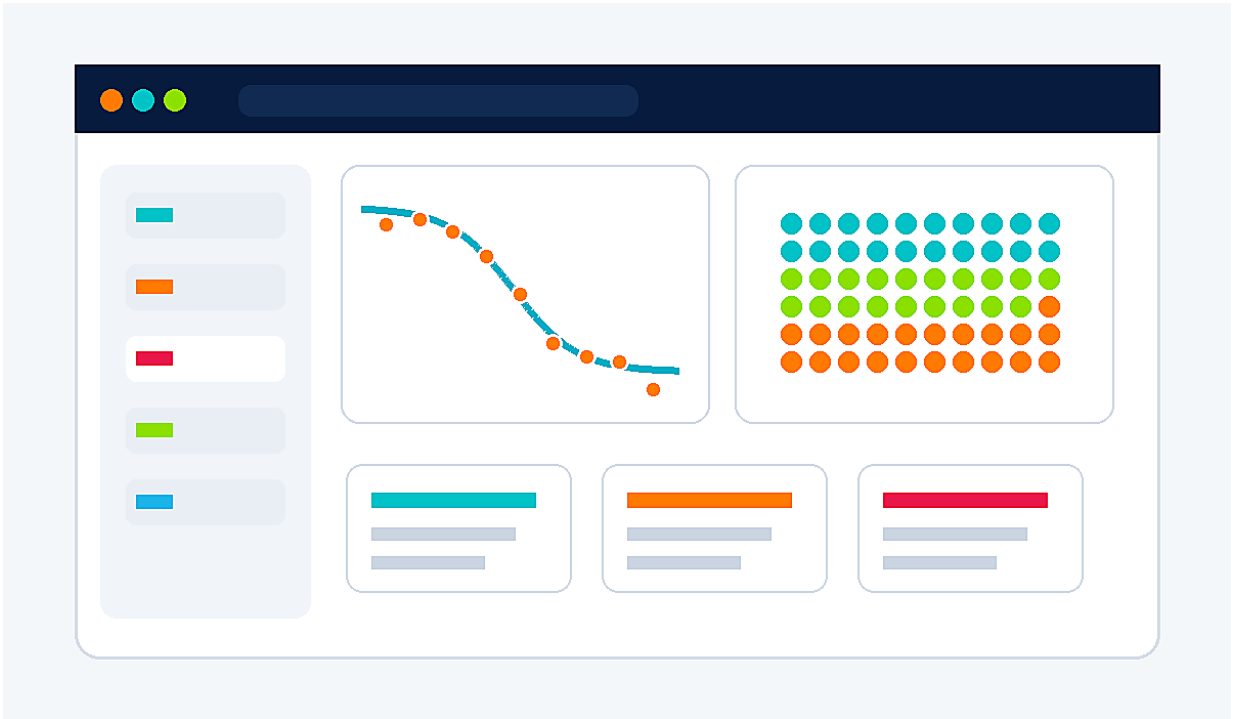
Workflow concept: ingest, fit, review, capture metadata, retrieve history, and govern access.

Dose-response workflows Fit curves and derive EC50/IC50, Hill slope, and fit-quality for common dose-response use cases.	Saved analysis history Search, reopen, and review prior analyses with associated context.
Configurable metadata Define fields and option lists that structure how analysis context is captured.	Role-based controls Differentiate Admin, Manager, and Analyst responsibilities.

What Scientific Buyers Should Care About

EIQ is designed to reduce operational friction without removing scientific judgment.

Analytical continuity You can save, search, reopen, and review analyses with their context, ensuring continuity from your initial experiment through subsequent discussions and decisions.	Context-rich retrieval You can search beyond experiment identifiers. Metadata-aware history retrieval allows you to locate experiments by therapeutic area, target class, or other relevant criteria.
Standardization without sacrificing usability Consistent recording of experimental details leads to more reliable scientific results. EIQ supports this by using structured metadata to ensure key information is captured uniformly.	Reduced spreadsheet dependency EIQ streamlines analysis by consolidating processes into a single shared application, reducing reliance on local spreadsheets and custom analyst workflows.



Dashboard concept: curve review, assay map, metadata cards, and workflow navigation in a single analytical workspace.

What Technical Buyers Should Care About

The platform is positioned as a maintainable application, not a one-off scientific tool.

Structured application architecture The system uses distinct frontend and backend layers so presentation, access control, analytical persistence, and administrative logic remain organized and maintainable.	Administrative governance Administrative capabilities help manage user access and maintain metadata field definitions in a supportable system.
Role-aware design Differentiated roles such as Admin, Manager, and Analyst provide a realistic model for teams with varying responsibilities.	Extensibility Configurable metadata fields and option lists allow the platform to adapt to changing study structures and organizational vocabulary.
Compliance posture foundation While EIQ is not positioned as a fully validated regulated system, it is architected for data integrity: its access control and metadata model align with audit-log and separation-of-duties expectations, providing a clear path toward more controlled environments.	

Core Capabilities

EIQ combines scientific workflow support with administrative control points.

Capability	Buyer relevance
Dose-response workflow support	4PL and 5PL curve fitting with derived parameters (EC50/IC50, Hill slope, asymptotes, goodness-of-fit), variable point counts, replicate structures, and endpoint-oriented interpretation.
Saved analysis history	Searchable grouped history so users can reopen prior work and compare experiments with less manual reconstruction.
Controlled metadata field configuration	Administrative field definitions that support organization-wide and project-specific data requirements.
Editable select-list option management	Allowed values can be maintained from the administrative interface to discipline metadata vocabulary.
User management	User creation, editing, role assignment, password reset, and activation status without direct database edits.

Access Control Model

Admin	Manager	Analyst
Full configuration and user management authority.	Broad access to analytical records with restricted destructive actions.	Operationally scoped analytical access appropriate to assigned work.
Manages users, roles, metadata fields, and option lists; performs password resets and activation control.	Reviews and oversees analyses across the team; cannot delete records or modify system configuration.	Runs and saves dose-response analyses within assigned scope; no user-management or configuration rights.

Data Integrity and Governance Direction

Platform selection is about today's function and tomorrow's governance expectations.

From a buyer perspective, one of EIQ's strongest characteristics is that it is purpose-built for a controlled analytical environment, with governance designed in rather than added later.

- Attributable user identity.
- Administrative separation of duties.
- Controlled metadata configuration.
- User activation and deactivation controls.
- Searchable historical records.
- Reduced dependence on uncontrolled local artifacts.

Deployment and Operational Considerations

EIQ is ideal for teams seeking a centralized application rather than local analysis tools. Its web-based design enables centralized management, shared user access, controlled deployment, and feature enhancements without disrupting existing workflows.

Evaluation Criteria for Buyers

Scientific workflow criteria Streamline dose-response reviews, preserve metadata, locate previous work using scientific context, and reduce reliance on scattered spreadsheets and scripts.	Technical criteria Simplify system maintenance, streamline user access management, enable metadata updates without code changes, and establish a foundation for improved governance.	Operational criteria Enable work to scale beyond a single analyst, increase process repeatability, and centralize administrative tasks that would otherwise require manual intervention in the shell or database.
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Ideal Use Cases and Roadmap Relevance

EIQ is best positioned where recurring analytical workflows need stronger context, reuse, and control.

The EIQ dose-response analysis application is well-suited for organizations that frequently conduct dose-response analyses across multiple projects, need improved metadata management, want easier access to past analyses, require administrative controls, seek to move beyond analyst-specific spreadsheets, or anticipate stricter governance requirements.

Roadmap direction Roadmap enhancements may streamline administrative workflows, expand metadata editing, enable Active Directory integration, enhance visibility, improve reporting and traceability, and refine role-based processes.	Buyer interpretation The platform should be evaluated both in its current state and as a foundation for a more comprehensive controlled analytical environment.
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Conclusion

The EIQ Dose-Response Curve Application offers scientific and technical buyers a modern solution for dose-response analysis that preserves control, maintainability, and future readiness. It streamlines frequent scientific workflows and resolves administrative and structural challenges that limit scalability.

For organizations evaluating analytical platforms, EIQ should be viewed not simply as a curve-fitting application, but as a configurable operational system for dose-response analysis and analytical record management.

Appendices

A. Administrative capabilities User creation; user editing and role assignment; password reset; user activation and deactivation; metadata field creation and maintenance; controlled option-list editing.	B. Metadata categories Therapeutic area; compound identifier; target or mechanism; assay type; cell line or model; instrument or equipment; program notes; quality-relevant markers.	C. Representative roles Admin; Manager; Analyst.
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