



# Insilico Inspector™ – Enterprise Software for Comparative Analysis of Strain Performance

Insilico's many years of experience in the design and optimisation of biotechnological production processes for many world-leading customers have paved the way for the first enterprise software for comparative analysis of strain performance – the Insilico Inspector™.

The Insilico Inspector™ sheds light into the black box view of microbial and mammalian bioprocesses by simulation of cell metabolism. For the first time, it is possible to automatically apply network analysis to fermentation data as soon as they become available in your data warehouse.

In one single analysis, it is now possible to answer questions such as

- Which of the tested strains meets my performance criteria best?
- How do different process phases contribute to overall performance?
- How much of the carbon introduced flows into the product?
- How much carbon is lost to by-products and maintenance?

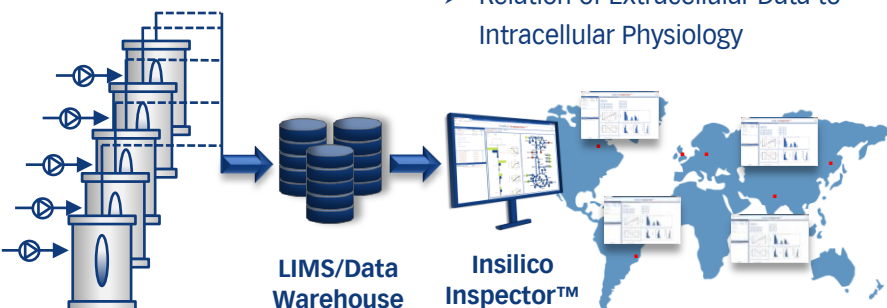
Using the Insilico Inspector™, the relation between cell metabolism and process phenotype is elucidated in a quantitative way. Through multiple views of animated pathway maps, results can be communicated easily between project managers, scientists and technicians. In addition, the software allows for company-wide access to data and analysis results.

## Input

- Feeding Streams
- Substrates
- Product
- Biomass

## Results

- Quantitative, Time-Resolved Metabolic Analysis
- Prioritisation of Strains According to Your Performance Criteria
- Relation of Extracellular Data to Intracellular Physiology



**Manage 1,000+ fermentations and access analysis results company-wide.**

## Key Features

- Enterprise Software for At-Line Bioprocess Diagnosis
- Designed for Mammalian and Microbial Cells
- Simulation of Cellular Metabolism with Mechanistic Network Model (Insilico Cell™)
- Automated Time-Resolved Analysis of Yields and Productivity
- Quantitative Comparison of Strain or Clone Performance
- Animated Views of Metabolite Fluxes
- Company-Wide Access to Data and Results
- Seamless Integration Into Your IT Infrastructure
- Management of 1,000+ Fermentations
- Export Results to PDF or Excel™

## Key Benefits

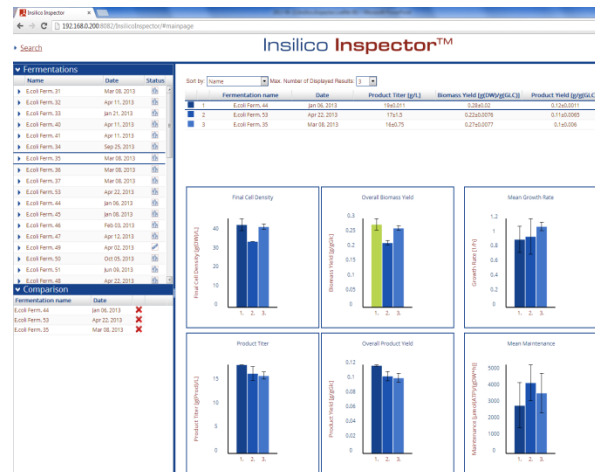
- Gain an Objective Decision Basis through Quantitative Comparison of Host Cells
- Complement Your QbD Initiatives by Quantitation of Metabolic Performance
- Understand the Pathways that Control Your Process
- Improve Data Quality Assurance through Automated Consistency Checks
- Obtain Additional Quality Control Criteria
- Document and Trace Your Process
- Simplify Communication of Results
- Cut Process Development Time

## Contact

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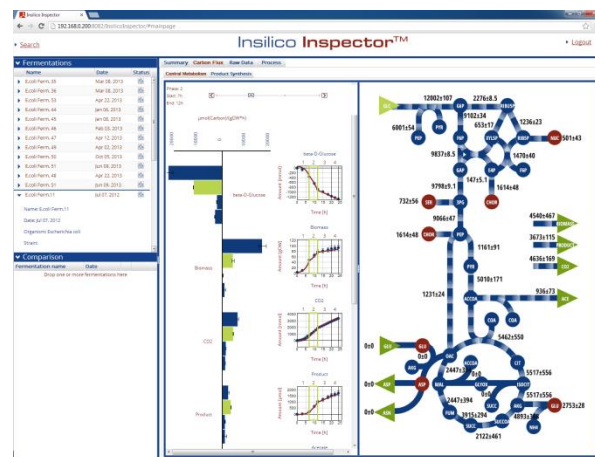


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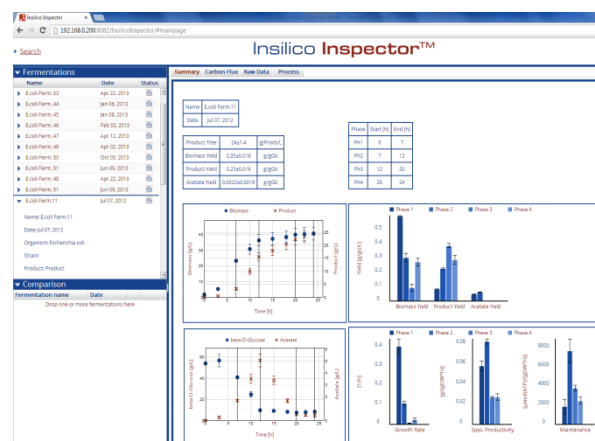
## Prioritise Strains According to Their Metabolic Performance

- Compare fermentation runs quantitatively and prioritise them according to your performance criteria
- Qualify, identify and document high performance fermentations
- Compare your high performance strains with parent strains
- Rank fermentations according to your preferred weighting of key process parameters such as
  - Specific productivity
  - ATP required for maintenance
  - Overall product yield
  - Overall biomass yield



## Elucidate Intracellular Fluxes on the Basis of Extracellular Data

- See how the observed phenotype as reflected in extracellular measurements is related to intracellular fluxes
- Inspect carbon and nitrogen usage inside your cells
- Compare physiological behaviour across process phases
- Ensure quality of measured data through automated consistency checks
- Communicate cell physiology easily with animated network fluxes
- Access background information through links to external resources upon click on a metabolite or flux



## Inspect Key Process Parameters in a Time-Resolved Manner

- See which physiologically distinct phases characterise your process
- Estimate the metabolic potential of your cells to increase product yield
- Obtain statistical measures for each physiological parameter
- Rely on an objective evaluation basis for every process phase:
  - Product, by-product and biomass yields
  - Specific productivity
  - ATP required for maintenance

**Insilico Biotechnology** is a market-leading company providing solutions and software for the simulation of living cells. An interdisciplinary team of experts offers customised solutions for the efficient manufacturing of biotechnological products and for the testing of pharmaceuticals by using high-performance computing and Insilico's proprietary software platform. For world-leading companies from the chemical and pharmaceutical industries, Insilico's technology lowers time, risk and costs of development processes. Founded in 2001, Insilico is a privately held company based in Stuttgart, Germany.