

# Genedata Screener® Time-Series Extension

## Bridging the Gap

Time-series data analysis can be challenging. With data reduction on instrument software, you don't have access to traces during subsequent analysis steps. This results in fragmented workflow, diluted efficiency, and less than optimal result quality. Genedata Screener with Time-Series Extension (TSE) bridges the gap between instrument and software.

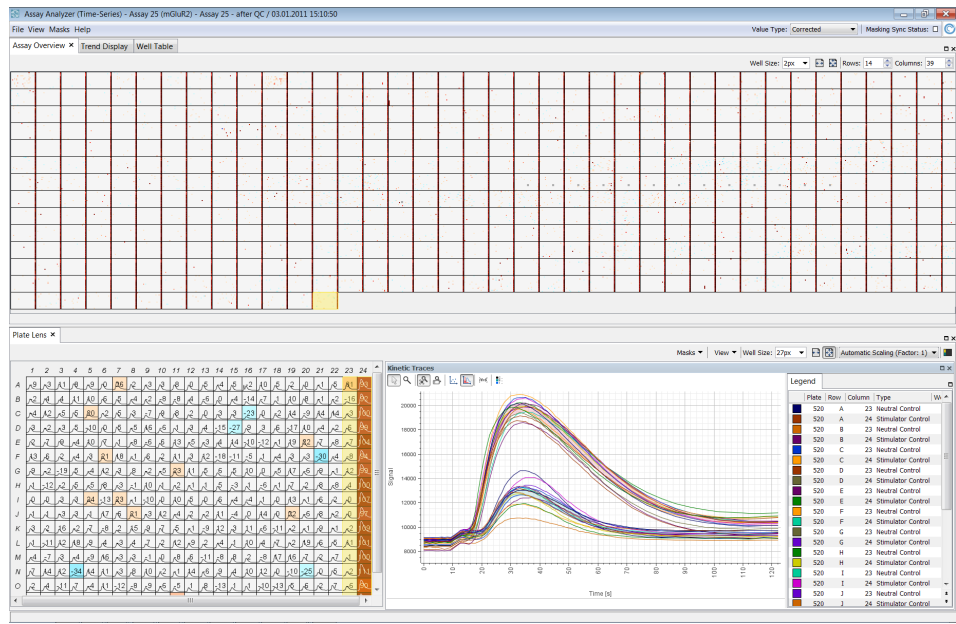
## Full Trace Access During Screening Analysis

Time-series data are acquired by a variety of screening instruments such as time-resolved fluorescence or surface plasmon resonance (SPR). Genedata Screener Time-Series Extension imports time-series data directly from instruments, allowing analysis and management in a single software package.

Following initial import, you have full control over the complete analysis from trace aggregation (data reduction to yield per well results) to secondary analysis (e.g. hit list creation or dose-response curve fitting).

Genedata Screener imports from all instruments producing time-series data. It acts as a central hub for managing and analysing such experiments while helping to standardize repetitive analysis steps.

- ▶ Trace Visualization
- ▶ Full Trace Access
- ▶ Scalable & Interactive
- ▶ On-the-Fly Aggregation
- ▶ Custom Aggregation Methods
- ▶ Label-Free
- ▶ Time-Resolved Fluorescence
- ▶ Time-Resolved Conductivity
- ▶ Thermal Shift Assays
- ▶ Automated Electrophysiology



Assay Analyzer with TSE (FIG. 1) Screenshot shows complete FLIPR campaign (top); a selected plate with in-well traces (lower left); and overlay of traces for selected wells (lower right).

## Single Application

Genedata Screener with TSE enables the complete analysis in a single software:

- ▶ Calculation of multiple results per well (user defined aggregation rules)
- ▶ On-the-fly changes of aggregation rules
- ▶ In-context visualization of kinetics traces of screening analysis
- ▶ Screening analysis updates upon refinement of aggregation rules

Access to other data sources is quickly set up using versatile and well-documented APIs.

## Improved Results

Display of traces in the context of plate quality control allows immediate identification of process artifacts and redefinition of aggregation rules to ensure optimal processing.

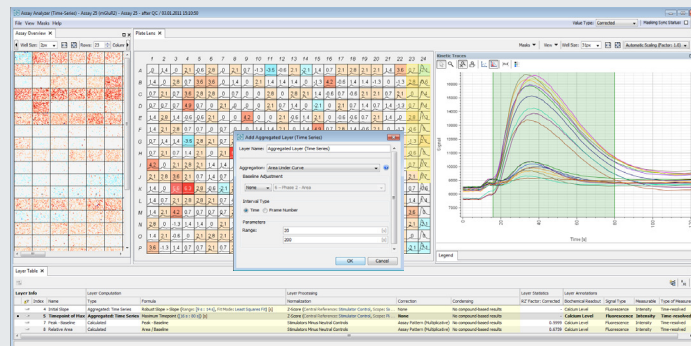
Often the shape of the trace indicates a specific biological behavior. The ability to create new aggregation rules at any times allows systematic identification of new, unexpected phenotypes. Additionally, TSE supports customer specific aggregation methods. Specific mathematical operations, custom fits, or experiment specific heuristics can be set up and maintained centrally.

## Operational Efficiency

Genedata Screener with TSE is a data analysis environment for all time-dependent experiments, conducted with different screening technologies such as label-free or automated electrophysiology. It further supports analysis of temperature dependent experiments like Thermal Shift or other screening technologies. Storage of raw data, data analysis and result management is centralized in a single software, reducing IT overhead and training. Result comparability is an added strength of Genedata Screener with TSE, as all analysis methods are managed centrally.

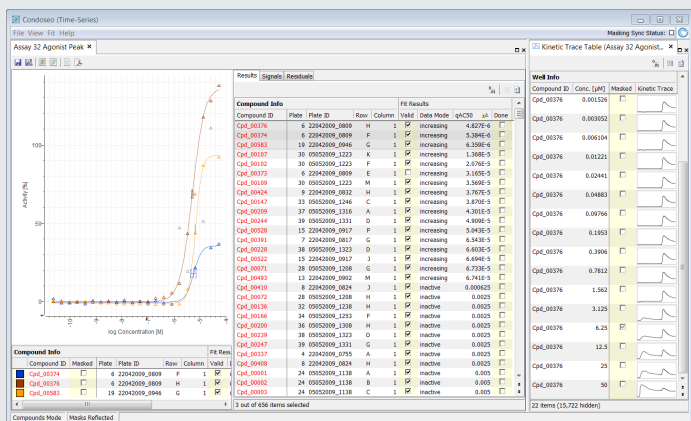
## Part of a Complete Screening Solution

Genedata Screener provides a centralized backbone for data analysis from plate-based screening experiments. Specific extensions for data from High Content, Cell Population or Time-Series Experiments specifically add support for these technologies.



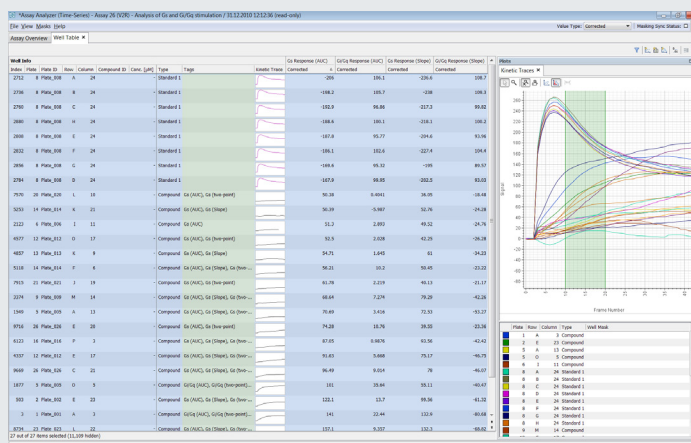
### Interactive Setup of Aggregation Rules

(FIG. 2) Aggregation editing is possible at any time with fast result recalculation.



### Instant Access to Traces

(FIG. 3) Easy access to traces in context of the dose-response curve fit, including annotation of concentration.



### Complete Campaign

(FIG. 4) Filter results for a complete data set; align traces for select compounds; and overlay traces for selected compounds for detailed comparison.



Genedata Screener® is part of the Genedata portfolio of advanced software solutions that serve the evolving needs of drug discovery, industrial biotechnology, and other life sciences.

Basel | Boston | Munich | San Francisco | Tokyo  
www.genedata.com | screener@genedata.com

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