Product Data Sheet

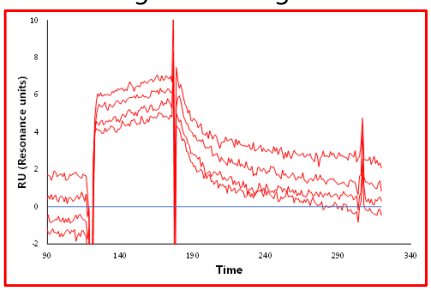
EpiGrammer software for calculation of enhanced sensorgrams

New version 3.1

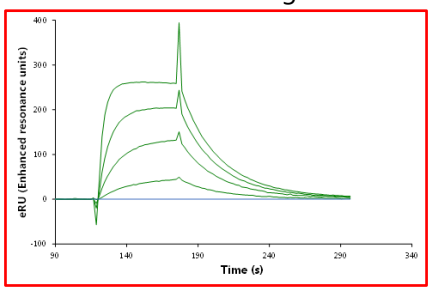
EpiGrammer™ software is used for calculating enhanced sensorgrams based on the proprietary Label-Enhanced SPR technology of Episentum. Enhanced sensorgrams – or 'epigrams' - are characterized by:

- 100-fold improved sensitivity as compared to standard sensorgrams.
- 100% specificity with respect to the dye-labelled species.
  - Elimination of non-specific binding signal contributions.
  - Elimination of bulk solvent refractive index disturbances.
- Access to perfectly label-free data in competitive mode.

Original sensorgrams

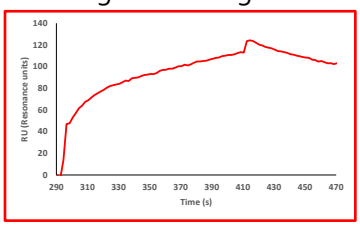


Enhanced sensorgrams



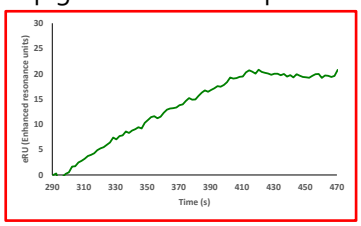
EpiGrammer can also split the original sensorgram data into two separate channels, each channel being specific for one of two different binding species. One channel – the 'epigram' – is specific for the dye-labelled species, while the other channel – the 'ektogram' – is specific for any unlabelled species:

Original sensorgram



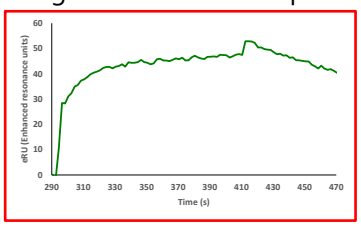
=

Epigram of labelled species



+

Ektogram of unlabelled species



News in versions 3.0 and 3.1

Two separate, individually optimized sensorgram enhancement algorithms have been implemented for the two different generations of Biacore™ instruments: Classic/2000/3000 and T100/T200, respectively. The linear range of the sensorgram enhancement algorithms has been further extended in order to quantitatively evaluate small binding signals in the presence of large disturbances. The main user interface and the data import and export routines are unchanged from previous versions.

Hardware requirements

Windows XP (SP3), Windows 7, Windows 8, or Windows 10; 2 GB RAM; 2 MB free HD space. For simplicity, EpiGrammer is preferably installed on the same computer as BIAevaluation Software, but EpiGrammer may also be run on a free-standing computer.

Data import

SPR dip data files in tabulated text format (.txt) can be imported from BIAevaluation Software (Biacore™ Classic/2000/3000) and from Biacore T100/200 Evaluation Software. Files can contain several data cycles.

Data processing

The calculation of enhanced sensorgrams is based on specially developed algorithms in order to maximize both the signal-to-noise level and the specificity of the data. The final selection of optimized calculation parameters is made with simple, interactive slide rulers.

All sensorgrams are displayed in a sensorgram table, and can be highlighted and selected before processing and/or final export. Selection of time windows for processing can be made. Selected sensorgrams can be set to a common zero baseline level at a selected time value. Sensorgram graphs can be zoomed and panned.

The response unit of enhanced sensorgrams is enhanced resonance units, eRU, which is a measure of the absorbance of the dye-label used. The eRU is not directly related to the resonance unit, RU, used in conventional SPR analysis.

Sensorgram graphs

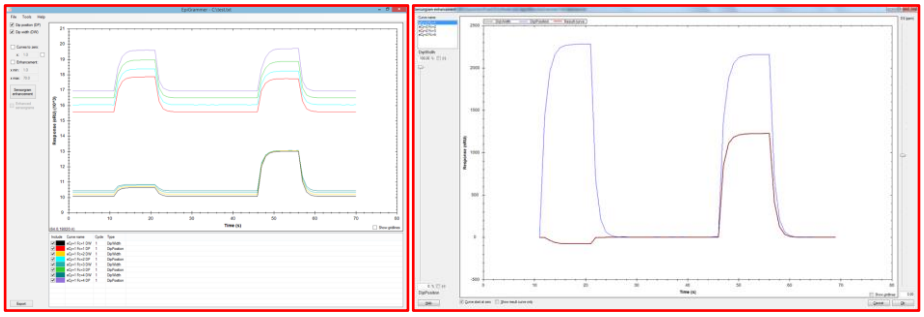
Images of sensorgram graphs can be saved in the following formats: emf, png, gif, jpeg, tiff, bmp.

Data export

Enhanced sensorgrams are exported and saved as tabulated text (.txt) files. The text files can then be re-imported by BIAevaluation or third party software for downstream data analysis. Users of TraceDrawer™ software (Ridgeview Instruments) can export and open the data in TraceDrawer with one click.

Documentation

A complete software manual is included in the Help menu of the software.



www.episentum.com sales@episentum.com

Episentum AB, Karins väg 5, 194 61 Upplands Väsby, Sweden Phone: +46 (0)72 007 79 08