



T-100 Technical information and Specifications

Detection technology	Surface Plasmon Resonance (SPR) biosensor
Information provided	Kinetic and affinity data (K_D , k_a , k_d), specificity, concentration and thermodynamics data.
Data presentation	Result tables, result plots and real time monitoring of sensorgrams
Analysis time per cycle	Typically 2-15 min
Automation	48 hours unattended operation
Sample type	Low MW drug candidates to high molecular weight proteins (also DNA, RNA, polysaccharides, lipids, cells and viruses) in various sample environments, e.g. in DMSO containing buffers, plasma, serum.
Required sample volume	Injection volume + 20-50 μ l (application dependent)
Injection volume	2-350 μ l
Flow rate range	From 1-100 μ l/min
Flow cell volume	0.06 μ l
Flow cell height	40 μ m
Sample/reagent capacity	1 x 96, or 384 well microplate + up to 33 reagent vials
Analysis temperature range	4-45 $^{\circ}$ C (maximum 20 degrees below ambient temperature)
Sample cooling	4-45 $^{\circ}$ C (maximum 15 degrees below ambient temperature)
Sample refractive index range	1.33-1.39
Buffer selector	Possibility to automatically switch between 4 buffers
In-line reference subtraction	Automatic
Typical working ranges	
Kinetics*:	
Association rate constant (k_a):	$10^3 - 10^7 \text{ M}^{-1}\text{s}^{-1}$ (and higher for macromolecular analytes)
Dissociation rate constant (k_d):	$10^{-5} - 0.5 \text{ s}^{-1}$
Sample concentration:	$10^{-3} - 10^{-11} \text{ M}$
Molecular weight detection	>100 Da (ligand and analyte dependent)
Number of flow cells	4
Baseline noise	Typically <0.1 RU (RMS)
Baseline drift	Typically <0.3 RU/min
Dimensions (W x D x H) (footprint, excluding System Controller/computer)	Footprint: Instrument 600 x 615 x 690 mm
Net weight	Total: 60 kg
Mains requirements	Processing Unit and System Controller: Aurorange 100-240 Vac (\pm 10 %), 50-60 Hz, Class 1 equipment (protective earthing)

Power consumption	Processing Unit: max 6.3 A (at 100 Vac) System Controller: max 7.2 A (at 100 Vac)
Data handling and storage	
PC operating systems	Microsoft® Windows® 2000 or Windows® XP (Professional)
Interfacing	Possibilities for import of sample data and export of results, e.g. from and to LIMS
Compliance	
Safety standard	EU:EN61010-1(2001), EN61010-1-081 (2002) North America: UL61010A-1 CAN/ CSA-C22.2 No.1010.1
EMC	EN 61326-1 (1997), Amendment A1 (1998) and Amendment A2 (2001)
GxP	Technical controls for 21 CFR Part 11(ER) compliance Validation support incl. Equipment Qualification (requires Biacore T100 GxP Package)