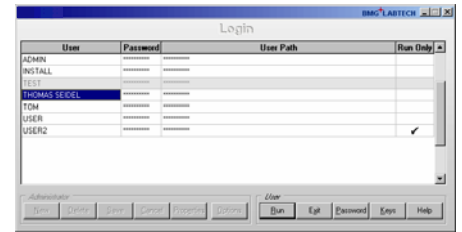


Quick Guide OPTIMA Software

STARTUP

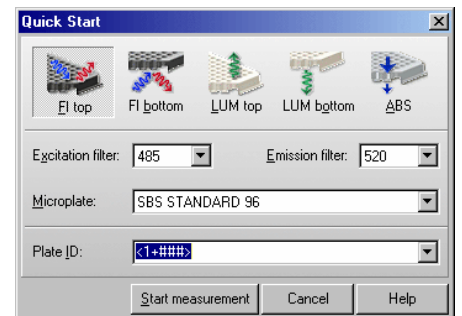
- Turn on the instrument and the computer.
- Start the **OPTIMA Control** software.
- Login with your password or just click 'Run' to login as "User".



To measure a microplate, you can either use the quick start function or you can execute a pre-defined test protocol.

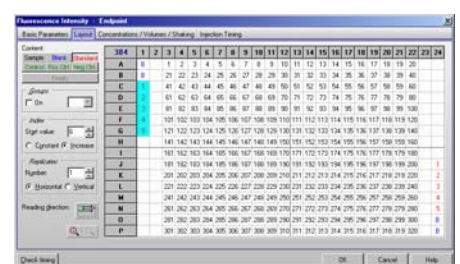
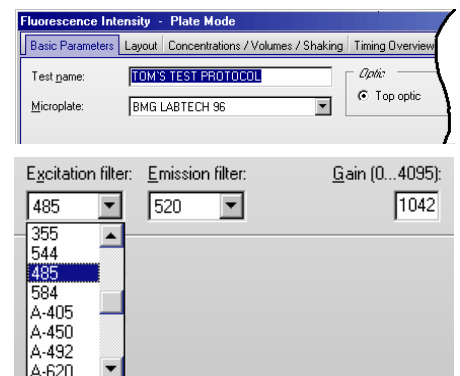
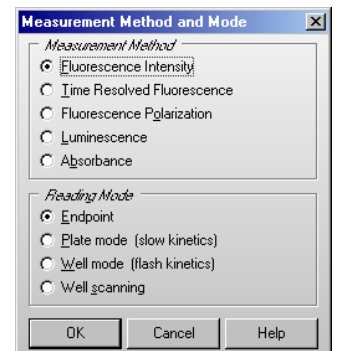
QUICK START

1. To measure a full plate in endpoint mode without defining a test protocol, click the 'Quick Start' button:
2. Select the measurement method. Choose the **excitation** and **emission filters** and the type of **microplate** that will be used.
3. A plate identifier (**Plate ID**) can also be specified (optional).
4. **Start the measurement.**




PROTOCOL DEFINITION

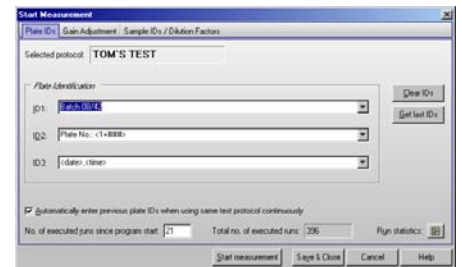
1. To create a new **test protocol** or to edit an existing one:
 - Click the 'Test protocols' button:
 - Double click the **protocol name** to edit an existing protocol or click 'New' to create a new protocol. Choose the *Measurement Method* (FI, FP, TRF, luminescence, absorbance) and choose the *Reading Mode*:
 - **End point** for single readings
 - **Plate mode** for slow kinetics
 - **Well mode** for fast kinetics
 - **Well scanning** for scanning (useful if you use large wells and if the samples are not equally distributed)
2. Inside the protocol definition window:
 - Enter a **test protocol name**.
 - Choose the **microplate** being used (Greiner, Corning, Nunc, etc.).
 - Type in a **positioning delay** (0.2s for non-cell based assays, or else 0.5s).
 - *Plate Mode*: Type in the **no. of cycles** (how many times the reader will cycle through the plate).
 - *Well Mode*: Type in the **no. of intervals** (how many times the reader will read the well).
 - Type in the **no. of flashes** to be used per reading (default settings are recommended).
 - Choose the **excitation** and **emission filters** to be used.
 - Select the 'Layout' sheet. Enter the position of samples, blanks and standards (if any).
 - If standards and/or reagent dispenser(s) are used, type in the values in the 'Concentrations / Volumes / Shaking' window.
 - Click the 'Check timing' button. This gives you the smallest possible cycle time (*Plate Mode*) or interval time (*Well Mode*). A longer time can be achieved by typing in a higher value in the 'Basic Parameters' sheet.





Quick Guide OPTIMA Software

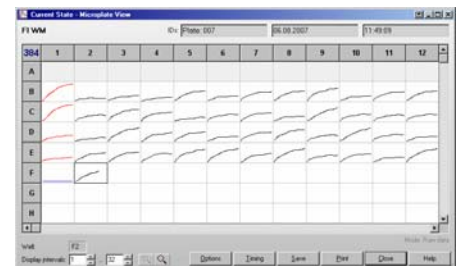
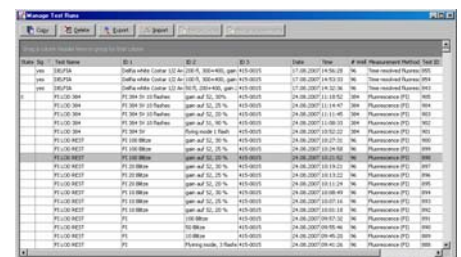
MEASURING (executing pre-defined protocols)

1. Click the 'Measure' button: 
2. It is possible to define up to three plate identifiers in the 'Start Measurement' sheet.
3. In the 'Gain Adjustment' sheet, select the well that will have the highest intensity and click the 'Gain adjustment' button:
 - The **required value** should be 90% in endpoint readings (giving highest values around $65000 - 10\% = 58500$).
 - For kinetic measurements, 10% - 50% could be the required value (this is dependent on the expected increase in the signal).
4. Click the 'Start measurement' button.

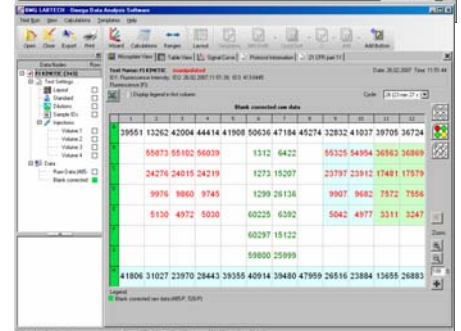


RESULTS

1. To see the measurement results during a reading:
 - Click the 'Current State Graphics' button . Different display options are available, e.g. curve, spectra...
2. To perform data calculations using the **MARS Data Analysis** software:
 - Close the 'Current State' window.
 - Click the 'Data Analysis Software' button: 
3. In the 'Open Test Runs' window:
 - Double click the **test name** of the test run to be analyzed
4. Analyze the measured data:
 - Select the data to be displayed in the working area with the navigation tree (Data Node) on the left side of the main window.
 - Use the standard calculation wizard to perform a quick curve fit calculation; or use the calculation menus to define what is to be calculated and to be displayed.
 - To see a standard curve, open the 'Standard Curve' page. The calculated unknowns are displayed in the 'Microplate View' and the 'Table View'.
 - To remove outliers, simply shade them out in the 'Microplate View' using the toggle function (Ctrl -T).
 - For kinetic measurements (more than one measured cycle or interval), choose the range(s) of interest (**Calc. Start** and **Stop**) and the data values from these ranges can be evaluated using a kinetic calculation.

Name	Date	Status
1001	2007-08-08	Completed
1002	2007-08-08	Completed
1003	2007-08-08	Completed
1004	2007-08-08	Completed
1005	2007-08-08	Completed
1006	2007-08-08	Completed
1007	2007-08-08	Completed
1008	2007-08-08	Completed
1009	2007-08-08	Completed
1010	2007-08-08	Completed
1011	2007-08-08	Completed
1012	2007-08-08	Completed
1013	2007-08-08	Completed
1014	2007-08-08	Completed
1015	2007-08-08	Completed
1016	2007-08-08	Completed
1017	2007-08-08	Completed
1018	2007-08-08	Completed
1019	2007-08-08	Completed
1020	2007-08-08	Completed
1021	2007-08-08	Completed
1022	2007-08-08	Completed
1023	2007-08-08	Completed
1024	2007-08-08	Completed
1025	2007-08-08	Completed
1026	2007-08-08	Completed
1027	2007-08-08	Completed
1028	2007-08-08	Completed
1029	2007-08-08	Completed
1030	2007-08-08	Completed
1031	2007-08-08	Completed
1032	2007-08-08	Completed
1033	2007-08-08	Completed
1034	2007-08-08	Completed
1035	2007-08-08	Completed
1036	2007-08-08	Completed
1037	2007-08-08	Completed
1038	2007-08-08	Completed
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1043	2007-08-08	Completed
1044	2007-08-08	Completed
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1096	2007-08-08	Completed
1097	2007-08-08	Completed
1098	2007-08-08	Completed
1099	2007-08-08	Completed
1100	2007-08-08	Completed



Blank control	Data
39551	13262
42004	44414
41908	50636
47184	45274
32832	41027
39705	39705
36724	
58873	58102
56039	1312
6422	55325
54954	36863
36869	24274
24019	24219
1273	15207
23797	23912
17481	17979
9976	8860
9745	1259
26136	9907
9682	7372
7366	6130
4972	5030
60225	6392
5042	4977
3311	3247
60297	15122
59800	25999
41806	31027
23970	28443
39355	40914
38480	47959
26516	23894
13655	26883

