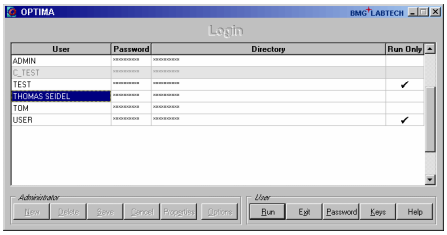
Quick Guide OPTIMA Software

STARTUP

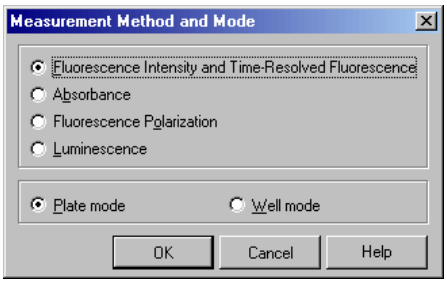
1. Turn on the instrument and the PC.

- Start the OPTIMA Control Program.
- Login with your password or just click '**Run**' to login as **User**.
- Check the **Reader configuration** in the status bar of the program's main window.
  You can change the configuration using 'Setup | Reader Configuration'.



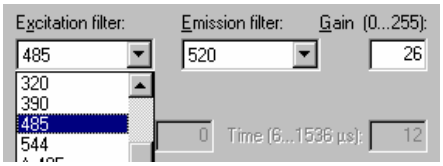
2. To edit or create a new **Test Protocol** or edit an existing one

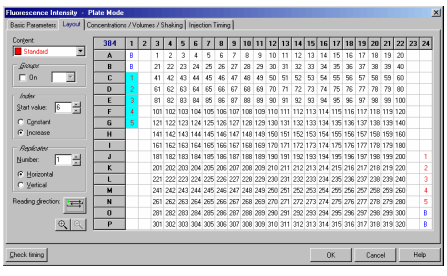
- Click the **Test protocols** button
- Double click the **Protocol name** to edit or click '**New**' and choose the reading method and:
  - **Plate mode** for single readings and for slow kinetics (see 3a).
  - **Well mode** for fast kinetics (see 3b).



3a. Plate mode:

- Enter a **Test name**.
- Choose the **Microplate** being used (Greiner, Corning, Nunc, etc.).
- Type in **Positioning delay** (0.2 s for non-cell based assays, or else 0.5 s).
- Type in **No. of cycles** (how many times the reader will cycle through the plate).
- Type in **No. of flashes** to be used per reading (default settings are the recommended numbers).
- Choose which filters are to be used (in **Excitation filter** position and **Emission filter** position).
- Choose the Layout sheet. Enter the position of samples (and 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 fastest possible cycle time (minimum cycle time). A longer cycle time can be achieved by typing in a higher value in the **Basic Parameters** sheet. A cycle time up to 10000 s is possible.





3b. Well mode:

- Enter a **Test name**.
- Choose the **Microplate** being used (Greiner, Corning, Nunc, etc.).
- Type in **Positioning delay** (0.2 s for non-cell based assays, or else 0.5 s).
- Type in **No. of intervals** (how many times the reader will read the well).
  Type in **No. of flashes** to be used per reading (default settings are the recommended numbers).
- Choose which filters are to be used (in the **Excitation filter** position and in the **Emission filter** position).
- Choose the Layout sheet and enter the position of samples (and 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 fastest possible Interval time (minimum interval time). A longer interval time can be achieved by typing in a higher value in the **Basic Parameter** sheet. An interval time up to 100 s is possible.

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MEASURING

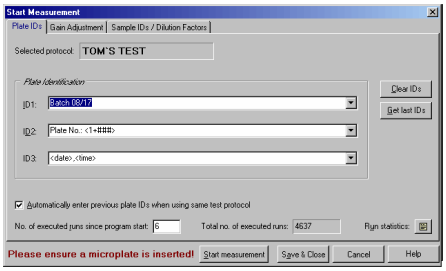
1. Click the **Measure** button: 

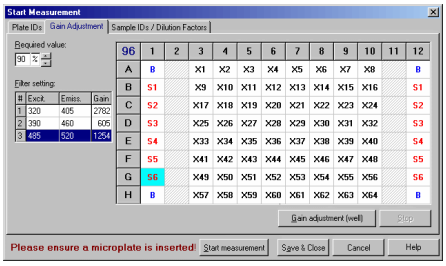
2. Enter up to three plate identifiers in the **Start Measurement** sheet (not necessary, but helpful).

3. In the **Gain Adjustment** sheet, select the well of greatest intensity and click **Gain adjustment**:

- 90% should be the **Required value** in endpoint readings (giving highest values around 65000-10% = 58500).
- In kinetic readings 10% - 50% could be the **Required value** (dependent on the increase in the signal).

4. Click the **Start measurement** button.

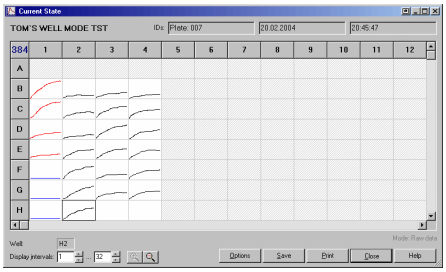




RESULTS

1. To see the results during reading:

- Click the **Current State Graphics** button  to see what is going on. In **Current State Graphics** different display options are available.

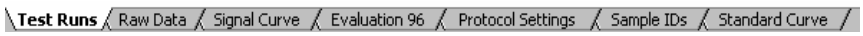


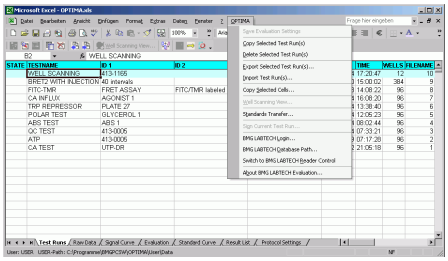
2. To see the results in Excel:

- Close the **Current State** window.
- Click the **Evaluation Part** button. 

3. In the **Test Runs** sheet:

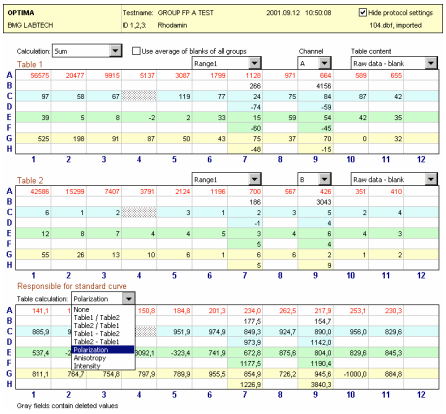
- Double click the **Testname** from which you want to see the results (this automatically opens the **Raw Data** sheet).





4a. For endpoint readings (only 1 cycle):

- Different ways of evaluating the results can be achieved in the tables in the **Evaluation sheet**.
- Use the drop down menus to define what is to be displayed in the 3 tables.
- To see a standard curve and calculate unknowns, use Table 3 in the Evaluation sheet and then select the **Standard Curve** sheet.
- To take out outliers simply delete them in the Evaluation sheet (the value will reappear by double clicking the Testname (unless the **save** button is pressed).



4b. For kinetic measurements, choose the range(s) of interest (**Calc. Start** and **Stop**) and the data values from within these ranges can be evaluated in the sheets with **Signal Curve**, **Evaluation**, **Standard Curve**, etc.

- Different ways of evaluating the results can be achieved in the tables in the **Evaluation sheet**.
- Use the drop down menus to define what is to be displayed in the 3 tables.
- To see a standard curve and calculate unknowns, use Table 3 in the Evaluation sheet and then select the **Standard Curve** sheet.