

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** (0.2s for non-cell based assays, or else 0.5s).
- 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** (0.2s for non-cell based assays, or else 0.5s).
- 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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Fluorescence Intensity - Plate Mode				
Basic Parameters	Layout	Concentrations / Volumes / Shaking	Injection Timing	

ОК

⊂ <u>W</u>ell mode

Cancel

Help

• Plate mode

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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:
- \Test Runs / Raw Data / Signal Curve / Evaluation 96 / Protocol Settings / Sample IDs / Standard Curve /
- 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.





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