

Bio-Plex Manager™ MP Software
Getting Started Guide
Version 1.0



Bio-Plex Manager™ MP

Software

Getting Started Guide

Version 1.0

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Bio-Rad Technical Support Department

The Bio-Rad Technical Support department in the U.S. is open Monday through Friday, 5:00 AM to 5:00 PM, Pacific Time. Worldwide technical support is available on the Web at www.consult.bio-rad.com.

Phone: 1-800-424-6723, option 2

Fax: 1-510-741-5802

Email: LSG.TechServ.US@Bio-Rad.com (U.S.)

LSG.TechServ.Intl@Bio-Rad.com (International)

Web: www.consult.bio-rad.com

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Table of Contents

| | |
|---|-----------|
| Chapter 1 Installing and Preparing Your System | 5 |
| Required Materials | 5 |
| Setting up your MAGPIX Instrument and Computer. | 6 |
| Differences Between Bio-Plex Manager MP and xPONENT | 7 |
| Next Steps | 7 |
| Chapter 2 An Overview of Bio-Plex Manager MP | 9 |
| Run the Daily Start Up Routine. | 10 |
| Create the Protocol. | 13 |
| Run the Protocol. | 20 |
| Analyze Your Data in Bio-Plex Manager 6.x. | 24 |
| Run the Shut Down Routine | 26 |
| Chapter 3 Analyzing Your Data | 27 |
| Exporting Your Data from the Analyze/Export View | 27 |
| Optimizing the Standard Curve in Bio-Plex Manager 6.x. | 29 |
| Analyzing Your Data Using Other Software | 32 |
| Chapter 4 Maintaining the MAGPIX Instrument | 33 |
| Daily Maintenance. | 33 |
| Weekly Maintenance. | 33 |
| Cleaning the Sample Probe | 34 |
| MAGPIX Maintenance. | 35 |

| | |
|--|-----------|
| Appendix A License Activation | 37 |
| Activating the Bio-Plex Manager MP License | 37 |
| Activating the License Online | 37 |
| Activating the License through Technical Support | 39 |
| Generating the Credentials File | 40 |
| Activating the Software with a License File | 42 |

1 Installing and Preparing Your System

This chapter gives you an overview of how to get your MAGPIX instrument and your computer installed and prepared for use.

Required Materials

You will need the following materials to complete setting up the MAGPIX instrument.

| Material | Where to find it |
|---|---|
| Probe height adjustment plate | Bio-Plex Manager™ MP software box |
| Well strip | Calibration kit or performance verification kit |
| Reagent block | Accessory tray in the MAGPIX shipping crate |
| Calibration kit (catalog #171-213001) Performance verification kit (catalog #171-213002) | These two kits are shipped separately. |

Note: The location for the materials applies to the new MAGPIX users.

You will also need the following materials for daily maintenance of the MAGPIX instrument:

- 70% ethanol or isopropanol
- 10% bleach
- Distilled or deionized water
- 0.1N NaOH

Setting up your MAGPIX Instrument and Computer

To set up your MAGPIX instrument and computer

1. Follow the instructions for your situation:

- **You just purchased the MAGPIX instrument from Bio-Rad.**

Follow the instructions in the Computer and MAGPIX Assembly Instructions (part #10020326) that are included in the MAGPIX shipping crate.

- **You were using the xPONENT software to run the MAGPIX instrument and you now want to use the Bio-Plex Manager MP software.**

Follow the instructions on the Bio-Plex Manager MP software folder to install the software. Next, follow the instructions in Appendix A to activate your software.

2. Start Bio-Plex Manager MP and complete the steps in the Setup MAGPIX wizard.

When you start the software for the first time, the Setup MAGPIX wizard is automatically launched. The wizard walks you through the steps of completing the preparation of your instrument, including adjusting the probe height, importing the calibration and verification kits, and running the maintenance routines.

Adjusting the Probe Height — Bio-Plex Manager MP simplifies and automates this procedure. With the push of a single button, the routine sets the probe for the most common plate types.

Complete the steps in this wizard before you use Bio-Plex Manager MP to run the instrument.

Note: You can always return to the wizard at a later time to complete the setup. You launch the wizard from the Instrument menu by clicking Setup MAGPIX.

Differences Between Bio-Plex Manager MP and xPONENT

If you have used xPONENT software with MAGPIX, there are some differences in how Bio-Plex Manager MP software works that you should be aware of:

- **Adjusting probe height** — adjusting the probe height is simple and reproducible. The software uses the probe height adjustment plate to set the probe height for the two locations in the off-plate reagent area and four heights for consumables. These settings cover most consumables. The height used in the four settings is indicated on the probe height adjustment plate and in the Bio-Plex Manager MP User Guide.
- **Start-of-day maintenance** — run the Daily Start Up routine at the beginning of each day. With Bio-Plex Manager MP, you do not have to keep track of whether the instrument requires calibration and verification or only verification on any given day. The software ensures that the correct routines are run each day. The Daily Start Up routine also runs additional fluidics routines if the instrument has been idle for some time.
- **Recommended routines** — the software always recommends a routine if it is required for the proper running of the instrument. There may be times when a recommended routine requires additional steps; follow these steps.

Next Steps

After you have completed the Setup MAGPIX wizard, continue with [Chapter 2, An Overview of Bio-Plex Manager MP](#).

2 An Overview of Bio-Plex Manager MP

Bio-Plex Manager™ MP Quick Guide

1 Run Daily Start Up at the start of each day.

1. Navigate to the Maintenance view.
 2. Follow the instructions in the application window.
 3. Click Start.
-

2 Create and run your protocols.

1. Navigate to the Create/Run Protocols view.
 2. Click New in the toolbar.
 3. Click Run in the toolbar to run the protocol
 4. Save the protocol to reuse it later.
-

3 Export and analyze your results.

Export your results. Use Bio-Plex Manager 6.x to analyze your data.

4 Run Shut Down at the end of each day.

1. Navigate to the Maintenance view.
 2. Select the Shut Down routine.
 3. Follow the instructions in the application window.
 4. Click Start.
-

Run the Daily Start Up Routine

To run the Daily Start Up routine

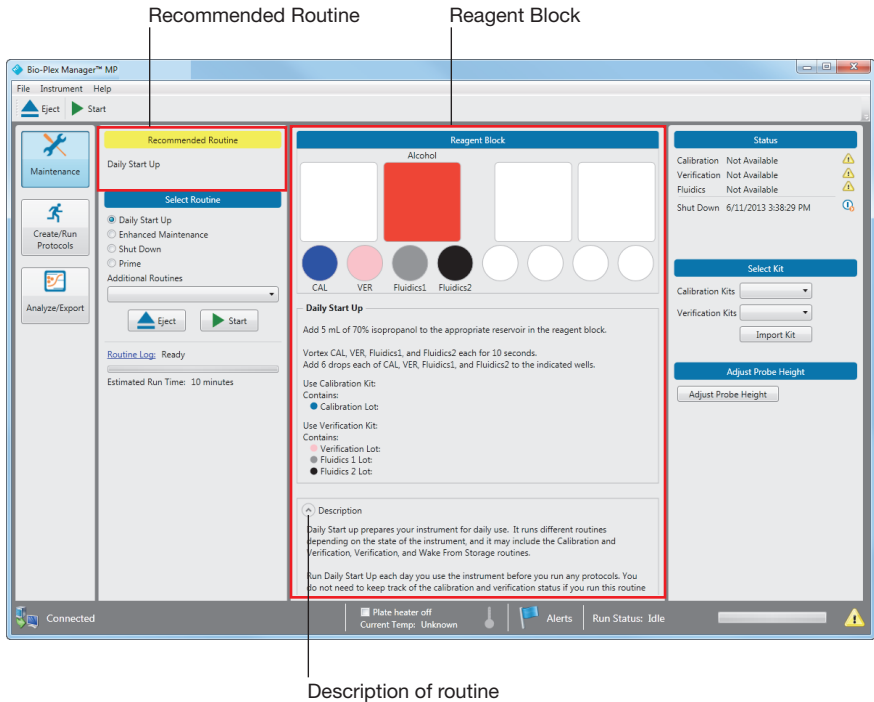
1. Start Bio-Plex Manager MP software.

Bio-Plex Manager MP opens to the Maintenance view. From the Maintenance view, you run the routines required to keep the MAGPIX instrument in good working order. Bio-Plex Manager MP keeps track of the status of the instrument so you do not have to remember which routines need to be run each day.

2. Start each day by running the routine in the Recommended Routine section. On most days, this is the Daily Start Up routine.

Note: The software monitors the instrument and schedules the running of the calibration and verification routines, as well as other performance-related routines. These routines are included as part of the Daily Start Up routine.

In the Maintenance view, the Reagent Block section provides information on filling the reservoirs and wells with the appropriate liquids and reagents. Click the Description arrow to display or hide a brief explanation of the routine.

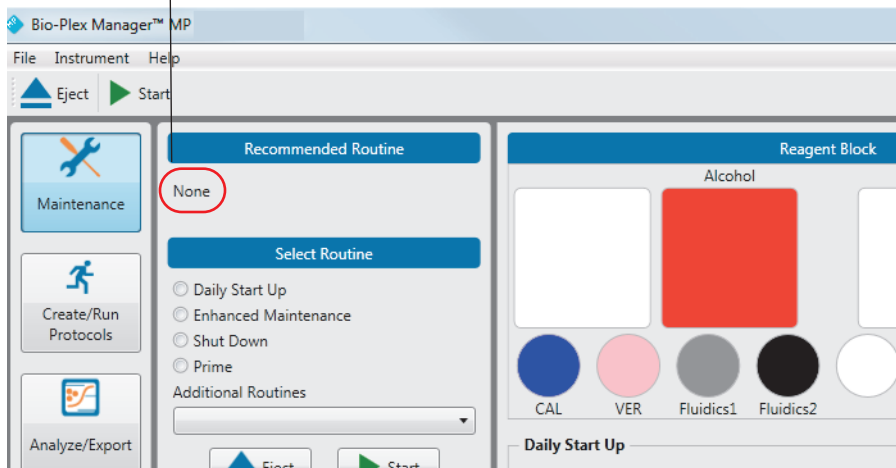


After the routine has been successfully run, *None* is displayed indicating that maintenance of the instrument is up to date.

Note: There may be times when you have to run more than one recommended routine before maintenance is up to date. For example, Enhanced Maintenance may be displayed as the recommended routine if calibration or verification fails. After the Enhanced Maintenance routine is successfully completed, Daily Start Up is displayed in the Recommended Routine section. Run the recommended routines until *None* is displayed.

Tip: If calibration, verification, or both routines fail after successive attempts, contact Bio-Rad Technical Support for assistance.

None is displayed when maintenance is up to date



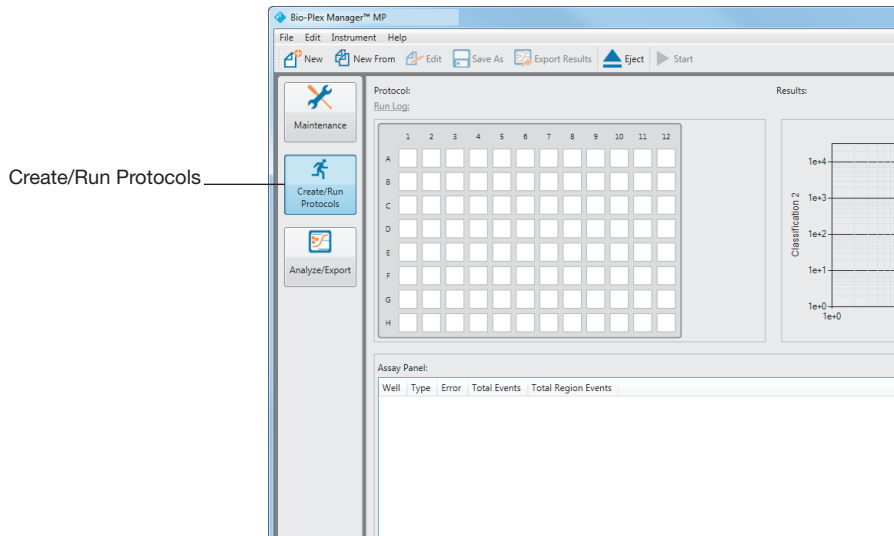
The maintenance of the MAGPIX instrument is up to date and you can now create and run your protocols.

Create the Protocol

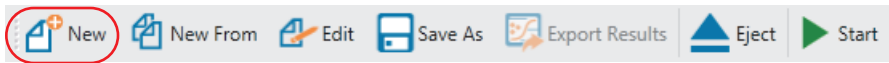
To create the protocol

1. Click Create/Run Protocols in the navigation bar to open the Create/Run Protocols view.

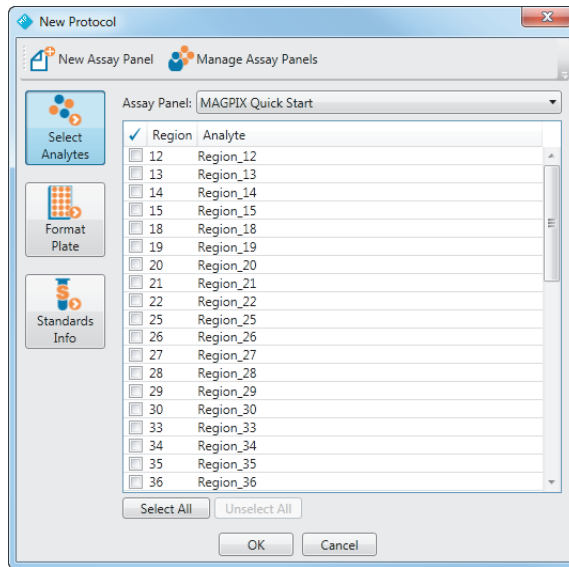
From this view, you create and run your protocols.



2. Click New in the toolbar to open the protocol dialog box.

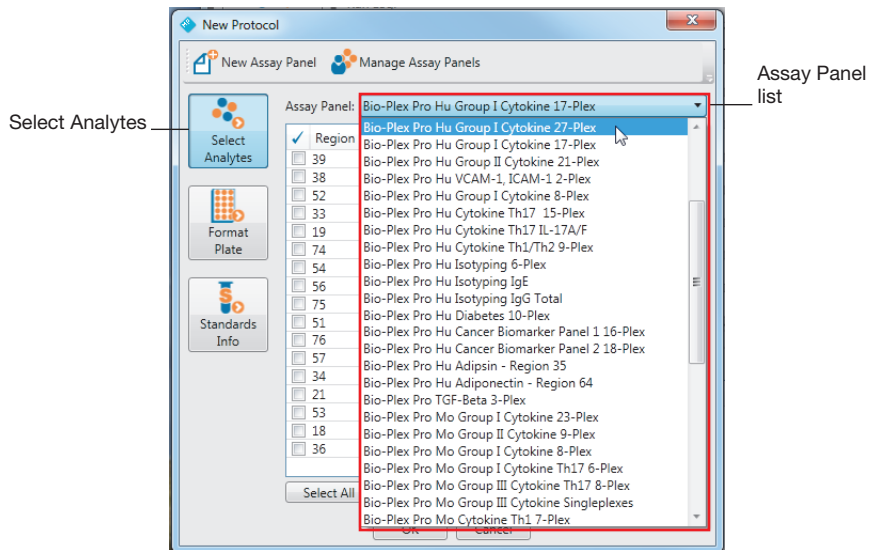


You create your protocols in the protocol dialog box. You click each of the buttons in the navigation bar to select the analytes, format the plate, and define the standards used.



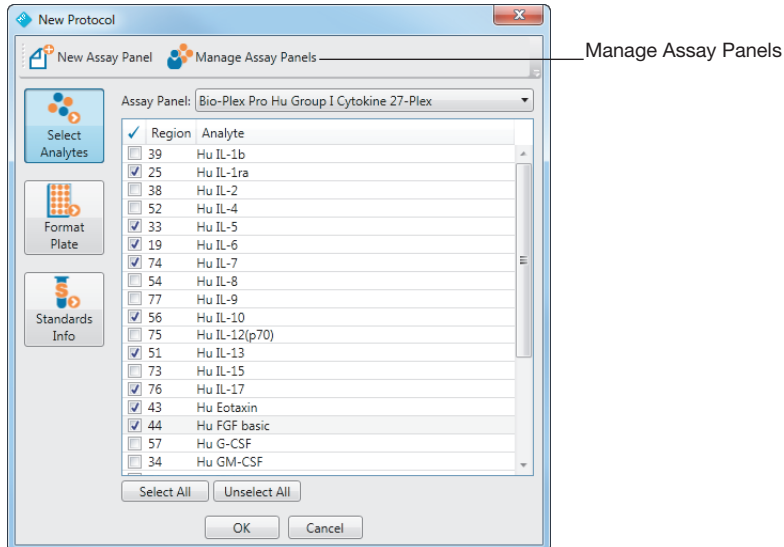
3. Click Select Analytes in the protocol dialog box to choose your assay panel and select your analytes.

You select the assay panel from the Assay Panel dropdown list. Once you make your selection, the pane is populated with a list of the analytes in the panel.



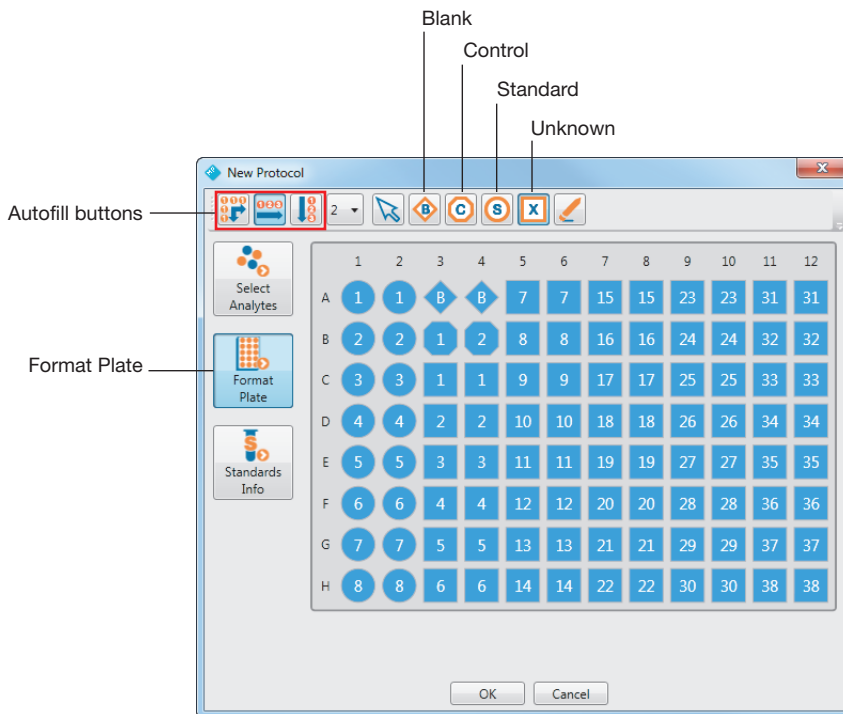
Select the analytes you want displayed in your results. The assay you purchased may include only a subset of the possible analytes. Refer to the product literature for a list of the included analytes.

There may be times when your assay includes analytes from two or more assay panels. You can combine analytes from multiple assay panels using the Manage Assay Panels feature.



- Click Format Plate to specify the types of wells in your plate.

Click the button in the toolbar to select the type of sample, then click the squares in the template to format your wells with that sample type.

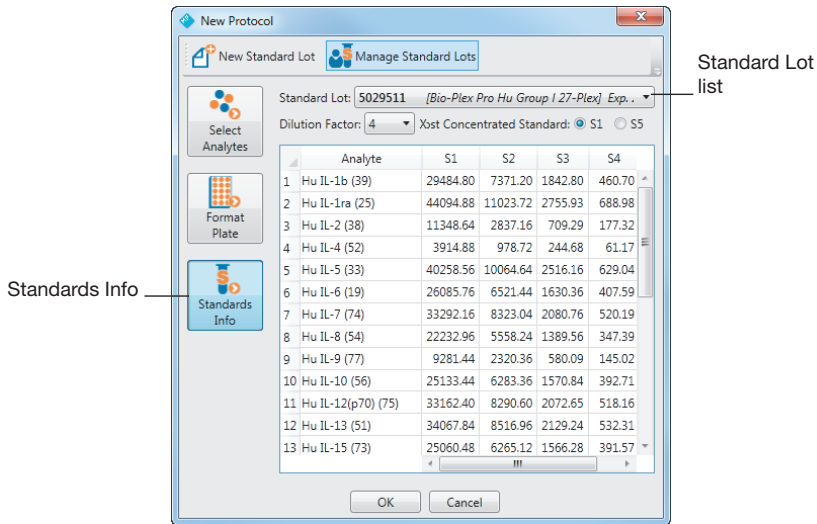


You can easily create replicate groups or format multiple wells at one time using the Autofill buttons. For more information on these features, see the online help for the software.

- Click Standards Info to choose the standard lot you are using with your experiment.

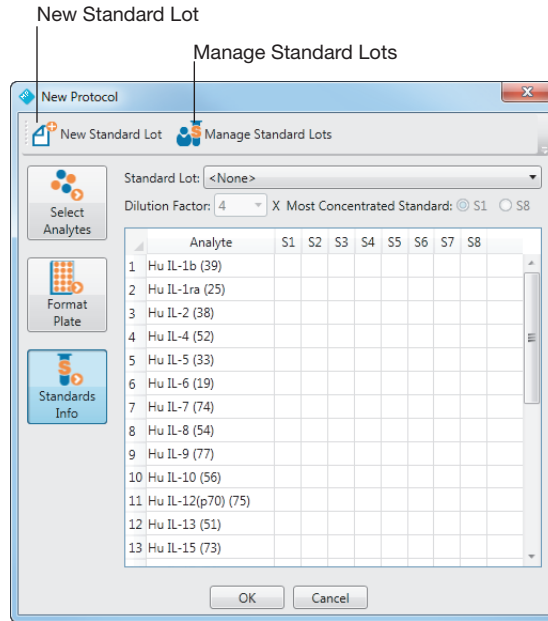
You select the standard lot you are using with your panel from the Standard Lot list and specify the dilution factor.

Note: You will not be able to specify the standards information until you select your analytes and format your plate with standard wells. If the fields on the pane are disabled, return to the Select Analytes pane and verify that you selected one or more analytes, and return to the Format Plate pane and verify that you have formatted at least one standard well.



- If the predefined standard lots do not meet your needs, you can create new standard lots or customize existing standard lots:
 - You can import a standard lot or make changes to existing standard lots with the Manage Standard Lots button.

- If the standards information is not available for your standard lot or you want to use custom values, then you must create a new standard lot. You do this with the New Standard Lot button.

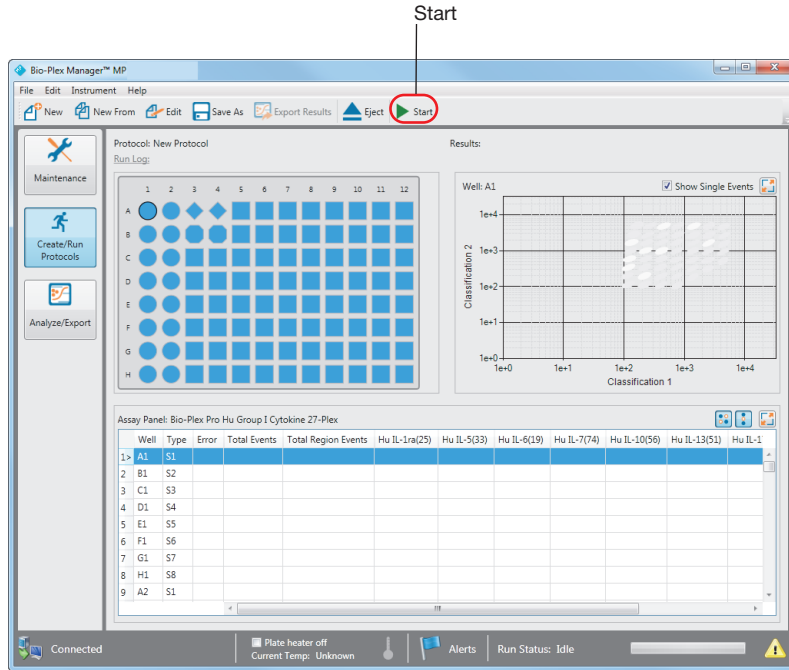


You have completed your protocol definition and you are now ready to run the protocol.

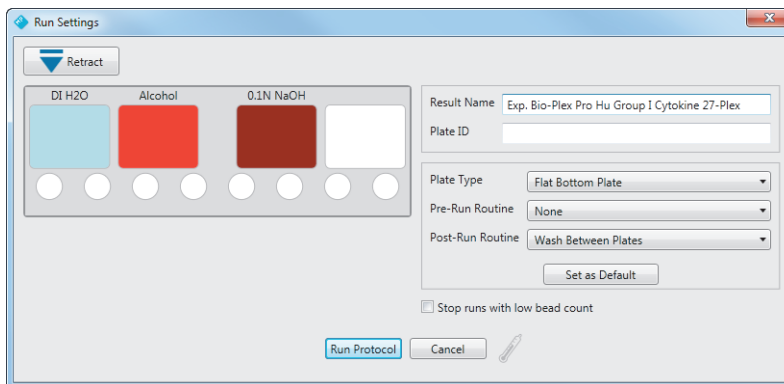
Run the Protocol

To run the protocol

1. Click Create/Run Protocols to go to the Create/Run Protocols view.
2. Click Start in the toolbar to open the Run Settings dialog box.



- Specify the settings for your run in the Run Settings dialog box.



Select the type of plate you are using in the Plate Type field. Refer to the table below for the description of the supported plate types.

| Plate Type | Compatible Consumable |
|-------------------|---|
| Flat bottom plate | Bio-Plex Pro™ flat bottom plate (black plate comes with Bio-Plex Pro assays, catalog #171-025001) |
| Filter plate | Millipore multiscreen plate (for example, MSBVN1210) |
| PCR plate | Bio-Rad low-profile unskirted PCR plate (for example, MLL-9601) |
| Auxiliary plate | Nunc PolySorp (for example, 475094), Nunc MaxiSorp (for example, 445105) |

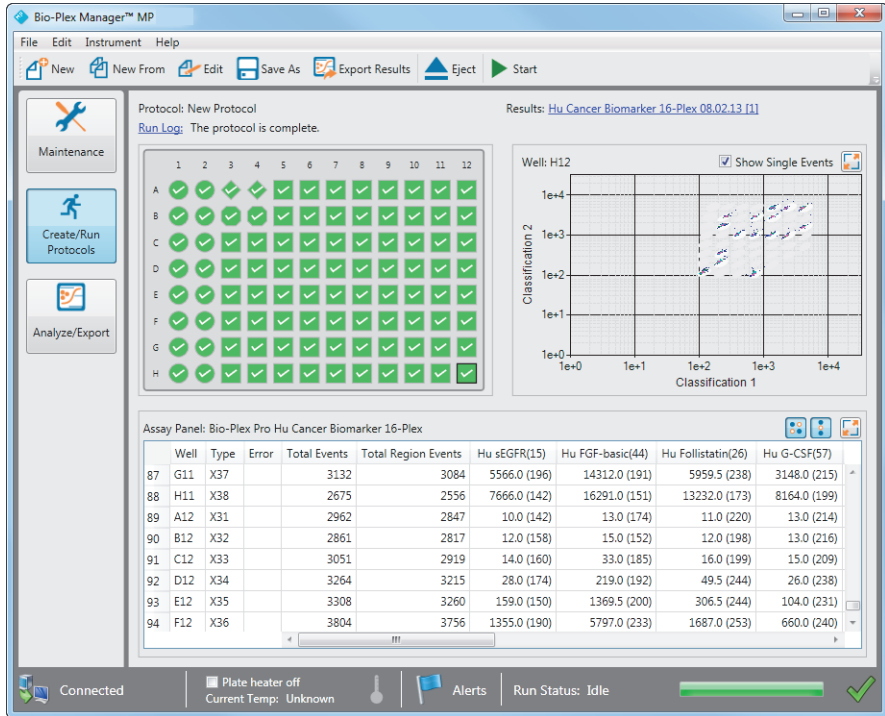
- (Optional) Specify a pre-run routine and a post-run routine.

Note: Bio-Rad recommends running the Wash Between Plates routine between protocol runs. This is the default setting for Post-Run Routine.

- Click Create/Run Protocols.

2 | An Overview of Bio-Plex Manager MP

Bio-Plex Manager MP populates the Create/Run Protocols view with the results.



If there are errors in your experiment, the wells with the error display a warning symbol and the table displays a warning symbol for the analytes. Click the Alerts icon to display information about the error. If a warning icon appears in the status bar, then maintenance is out of date.

The screenshot shows the Bio-Plex Manager software interface. On the left, there are buttons for Maintenance, Create/Run Protocols, and Analyse/Export. The main area displays a 96-well plate grid with green checkmarks for most wells and yellow warning icons for wells E1, F1, G1, and H1. Below the grid is a table with columns for Well, Type, Error, Total Events, Total Region Events, and several analyte columns. A red box highlights the row for well H2, which has a 'Region Selection/Severe Clag' error and low bead counts for several analytes. The status bar at the bottom shows 'Connected', 'Plate heater off', 'Current Temp: Unknown', 'Alerts: 1 messages', and 'Run Status: Idle'. A yellow warning icon is present in the status bar.

Wells with low bead count

Instrument alerts

Analytes with low bead count

Maintenance out of date

| Well | Type | Error | Total Events | Total Region Events | Hu vEGFR(15) | Hu FGF-basic(44) | Hu Follistatin(26) | Hu C-CSP(57) | Hu p41 |
|------|------|-------|--------------|---------------------|--------------|------------------|--------------------|--------------|--------|
| 9 | A2 | X1 | 817 | 808 | 7469.0 (53) | 16374.0 (55) | 12922.5 (58) | 8179.0 (70) | |
| 10 | B2 | X2 | 791 | 782 | 5604.0 (49)* | 14408.5 (36)* | 9933.0 (54) | 3055.5 (54) | |
| 11 | C2 | X3 | 717 | 714 | 1345.0 (41)* | 5861.0 (31)* | 1690.0 (61) | 645.0 (48)* | |
| 12 | D2 | X4 | 771 | 763 | 153.0 (53) | 1326.0 (39)* | 310.0 (61) | 111.0 (47)* | |
| 13 | E2 | X5 | 78 | 7 | 38.0 (4)* | 203.0 (1)* | 45.0 (4)* | 32.0 (2)* | |
| 14 | F2 | X6 | 73 | 7 | 20.0 (3)* | 37.0 (1)* | 17.0 (10)* | 15.5 (10)* | |
| 15 | G2 | X7 | 33 | 3 | 10.0 (3)* | 14.0 (3)* | 8.0 (3)* | 15.0 (3)* | |
| 16 | H2 | X8 | 29 | 2 | 8.0 (1)* | 15.3 (4)* | 12.5 (2)* | 8.0 (1)* | |

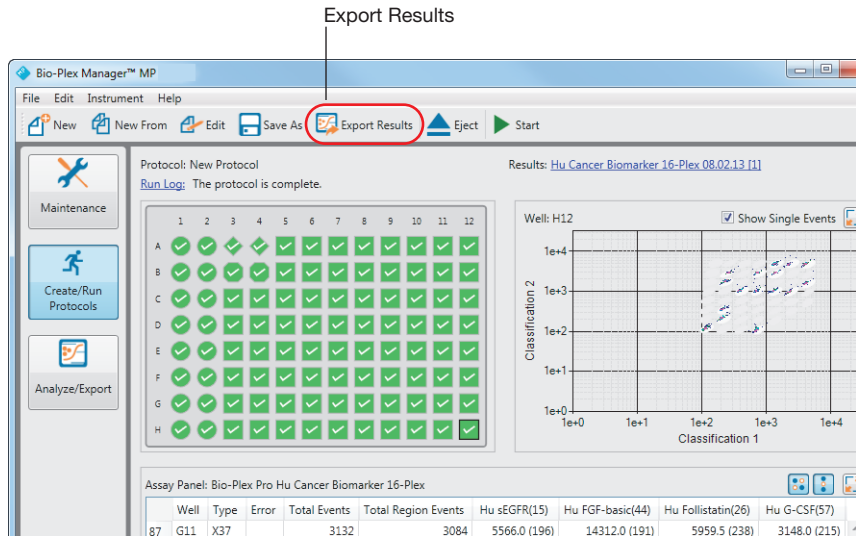
Analyze Your Data in Bio-Plex Manager 6.x

You create and run your protocols in Bio-Plex Manager MP and you analyze your data in Bio-Plex Manager 6.x. To analyze your data you first export the result to a file.

Note: Analysis of Bio-Plex Manager MP results is supported only with Bio-Plex Manager 6.0 or higher. Earlier versions of Bio-Plex Manager are not supported.

To analyze your data

1. After you run your protocol, click Export Results to analyze your results in Bio-Plex Manager 6.x.



- Follow the prompts to save your results to a file.

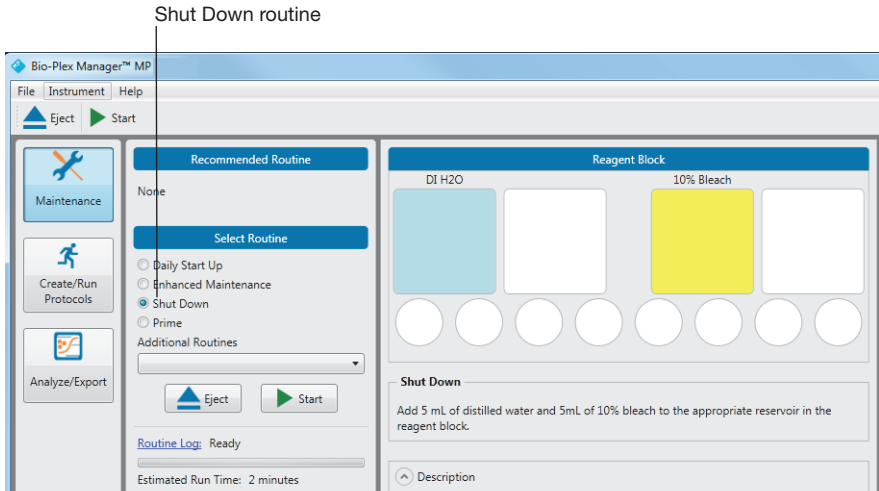
After the file is saved, Bio-Plex Manager MP prompts you to open Bio-Plex Manager 6.x to analyze your results. (You will see this prompt only if Bio-Plex Manager 6.x is installed on your computer.)

| | Type | Well | FI | FI - Bkgd | Std Dev | %CV | Conc in Range | Obs Conc | Exp Conc | (Obs/Exp) * 100 | Dilution |
|----|------|-------|---------|-----------|---------|------|---------------|----------|----------|-----------------|----------|
| 1 | S1 | A2,A3 | 18652.3 | 18652.3 | 1476.09 | 7.91 | *** | *** | 2944.80 | *** | 1.00 |
| 2 | S2 | B2,B3 | 19057.8 | 19057.8 | 295.22 | 1.55 | *** | *** | 7371.20 | *** | 1.00 |
| 3 | S3 | C2,C3 | 19067.0 | 19067.0 | 22.63 | 0.12 | *** | *** | 1642.80 | *** | 1.00 |
| 4 | S4 | D2,D3 | 11896.5 | 11896.5 | 522.55 | 4.39 | *** | *** | 480.70 | *** | 1.00 |
| 5 | S5 | E2,E3 | 5238.5 | 5238.5 | 108.19 | 2.07 | *** | *** | 115.18 | *** | 1.00 |
| 6 | C1 | A1 | 18989.0 | 18989.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 7 | C2 | B1 | 22111.0 | 22111.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 8 | C3 | C1 | 19723.5 | 19723.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 9 | C4 | D1 | 12172.0 | 12172.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 10 | C5 | E1 | 5027.0 | 5027.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 11 | X1 | A4 | 52.0 | 52.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 12 | X2 | B4 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 13 | X3 | C4 | 43.5 | 43.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 14 | X4 | D4 | 52.5 | 52.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 15 | X5 | E4 | 65.0 | 65.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 16 | X6 | A5 | 42.0 | 42.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 17 | X7 | B5 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 18 | X8 | C5 | 40.5 | 40.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 19 | X9 | D5 | 49.0 | 49.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 20 | X10 | E5 | 65.5 | 65.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 21 | X11 | A6 | 54.0 | 54.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 22 | X12 | B6 | 27.0 | 27.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 23 | X13 | C6 | 36.0 | 36.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 24 | X14 | D6 | 51.5 | 51.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 25 | X15 | E6 | 60.0 | 60.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 26 | X16 | A7 | 120.0 | 120.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 27 | X17 | B7 | 56.0 | 56.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 28 | X18 | C7 | 35.5 | 35.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 29 | X19 | D7 | 61.0 | 61.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 30 | X20 | E7 | 75.0 | 75.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 31 | X21 | A8 | 136.5 | 136.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 32 | X22 | B8 | 60.0 | 60.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 33 | X23 | C8 | 37.0 | 37.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 34 | X24 | D8 | 67.0 | 67.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 35 | X25 | E8 | 79.0 | 79.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |

For more information on analyzing your results, see [Chapter 3, Analyzing Your Data](#).

Run the Shut Down Routine

When you are done for the day, return to the Maintenance view and run the Shut Down routine.



The Shut Down routine cleans the fluidics lines and prevents the buildup of debris within the system. Bio-Rad recommends you run this routine **each day** you use the MAGPIX system to maintain your instrument.

3 Analyzing Your Data

You must first export your data to a file. Then this data file can be analyzed in Bio-Plex Manager™ 6.x or other analysis software.

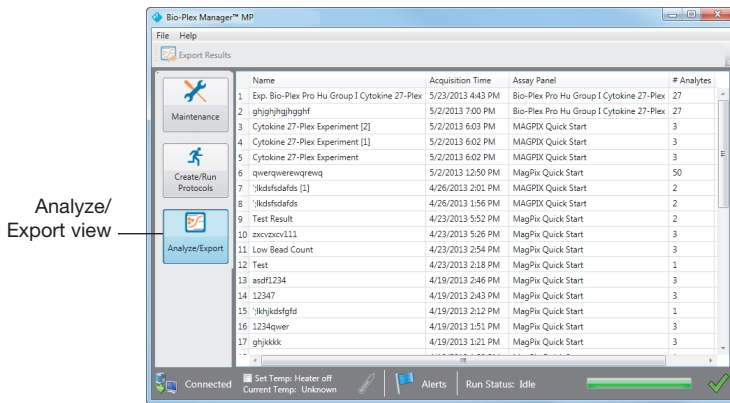
Exporting Your Data from the Analyze/Export View

You can analyze your data immediately after running your protocol using the Export Results command as described in this chapter. Or you can return at a later time and export your results from the Analyze/Export view into Bio-Plex Manager 6.x.

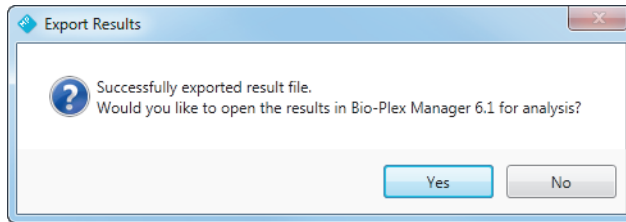
To export your result from the Analyze/Export view

1. Click Analyze/Export to navigate to the Analyze/Export view.

The result from each run is stored in the run results table. You can return to this view at any time and export your results to Bio-Plex Manager 6.x



2. Select the result you want to export and click Export Results.
3. Follow the prompts to save your results to a file.
4. Bio-Plex Manager MP prompts you to open Bio-Plex Manager 6.1 (or whatever version of the software is installed on your machine) to analyze your results. Click Yes.



Bio-Plex Manager 6.x displays the results.

| | Type | Well | FI | FI - Bkgd | Std Dev | %CV | Conc in Range | Obs Conc | Exp Conc | (Obs/Exp) * 100 | Dilution |
|----|------|-------|---------|-----------|---------|------|---------------|----------|----------|-----------------|----------|
| 1 | S1 | A2.A3 | 19052.3 | 1476.68 | 7.51 | *** | *** | 28424.00 | *** | *** | 1.00 |
| 2 | S2 | B2.B3 | 19057.8 | 285.22 | 1.55 | *** | *** | 7371.20 | *** | *** | 1.00 |
| 3 | S3 | C2.C3 | 19087.0 | 19087.0 | 22.63 | 0.12 | *** | *** | 1842.80 | *** | 1.00 |
| 4 | S4 | D2.D3 | 11098.5 | 11098.5 | 622.55 | 4.39 | *** | *** | 460.70 | *** | 1.00 |
| 5 | S5 | E2.E3 | 5238.5 | 5238.5 | 108.19 | 2.07 | *** | *** | 115.18 | *** | 1.00 |
| 6 | C1 | A1 | 16989.0 | 16989.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 7 | C2 | B1 | 22111.0 | 22111.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 8 | C3 | C1 | 19723.5 | 19723.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 9 | C4 | D1 | 12172.0 | 12172.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 10 | C5 | E1 | 5027.0 | 5027.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 11 | X1 | A4 | 52.0 | 52.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 12 | X2 | B4 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 13 | X3 | C4 | 43.5 | 43.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 14 | X4 | D4 | 52.5 | 52.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 15 | X5 | E4 | 65.0 | 65.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 16 | X6 | A5 | 42.0 | 42.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 17 | X7 | B5 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 18 | X8 | C5 | 46.5 | 46.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 19 | X9 | D5 | 49.0 | 49.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 20 | X10 | E5 | 65.5 | 65.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 21 | X11 | A6 | 54.0 | 54.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 22 | X12 | B6 | 27.0 | 27.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 23 | X13 | C6 | 36.0 | 36.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 24 | X14 | D6 | 51.5 | 51.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 25 | X15 | E6 | 60.0 | 60.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 26 | X16 | A7 | 120.0 | 120.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 27 | X17 | B7 | 56.0 | 56.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 28 | X18 | C7 | 35.5 | 35.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 29 | X19 | D7 | 61.0 | 61.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 30 | X20 | E7 | 75.0 | 75.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 31 | X21 | A8 | 136.5 | 136.5 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 32 | X22 | B8 | 60.0 | 60.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 33 | X23 | C8 | 37.0 | 37.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 34 | X24 | D8 | 67.0 | 67.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |
| 35 | X25 | E8 | 79.0 | 79.0 | 0.00 | 0.00 | *** | *** | *** | *** | 1.00 |

Optimizing the Standard Curve in Bio-Plex Manager 6.x

After you open your results in Bio-Plex Manager 6.x, follow these steps to optimize your results.

To optimize the standard curve

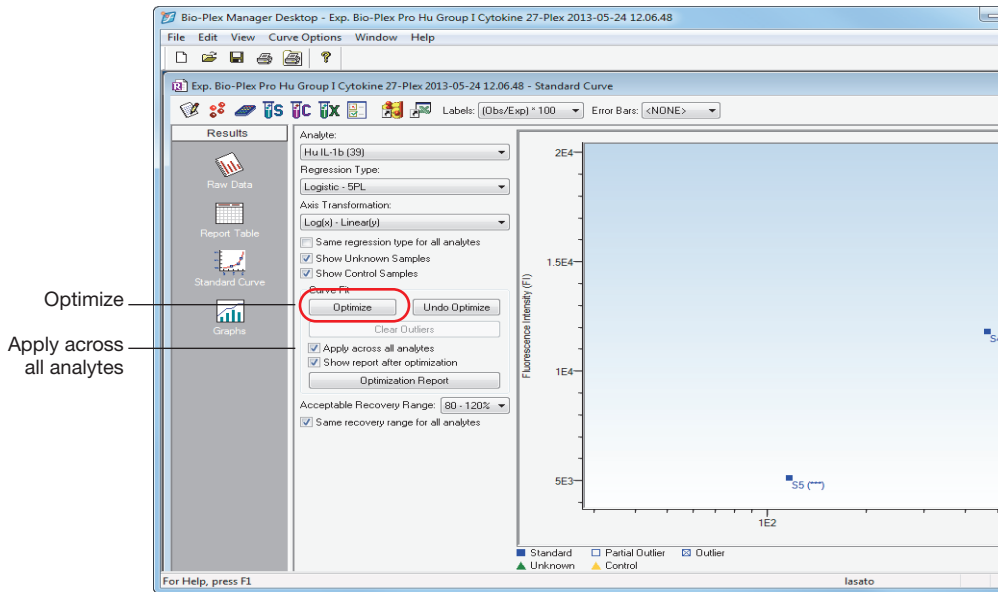
1. Click Standard Curve in the navigation bar.

The screenshot shows the Bio-Plex Manager Desktop interface. The main window displays a 'Report Table' with the following data:

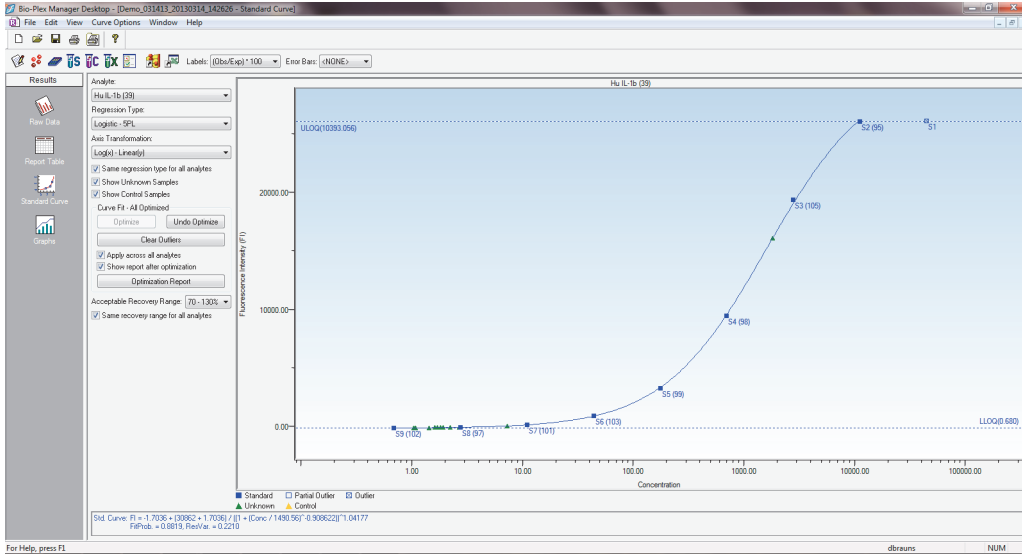
| | Type | Well | FI | FI - Bkgd | Std Dev | %CV | Conc in Range | Obs Conc | E |
|----|------|-------|---------|-----------|---------|------|---------------|----------|---|
| 1 | S1 | A2,A3 | 18652.3 | 18652.3 | 1476.09 | 7.91 | *** | *** | |
| 2 | S2 | B2,B3 | 19087.8 | 19087.8 | 295.22 | 1.55 | *** | *** | |
| 3 | S3 | C2,C3 | 19087.0 | 19087.0 | 22.63 | 0.12 | *** | *** | |
| 4 | S4 | D2,D3 | 11898.5 | 11898.5 | 522.55 | 4.39 | *** | *** | |
| 5 | S5 | E2,E3 | 5238.5 | 5238.5 | 108.19 | 2.07 | *** | *** | |
| 6 | C1 | A1 | 16989.0 | 16989.0 | 0.00 | 0.00 | *** | *** | |
| 7 | C2 | B1 | 22111.0 | 22111.0 | 0.00 | 0.00 | *** | *** | |
| 8 | C3 | C1 | 19723.5 | 19723.5 | 0.00 | 0.00 | *** | *** | |
| 9 | C4 | D1 | 12172.0 | 12172.0 | 0.00 | 0.00 | *** | *** | |
| 10 | C5 | E1 | 5027.0 | 5027.0 | 0.00 | 0.00 | *** | *** | |
| 11 | X1 | A4 | 52.0 | 52.0 | 0.00 | 0.00 | *** | *** | |
| 12 | X2 | B4 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | |
| 13 | X3 | C4 | 43.5 | 43.5 | 0.00 | 0.00 | *** | *** | |
| 14 | X4 | D4 | 52.5 | 52.5 | 0.00 | 0.00 | *** | *** | |
| 15 | X5 | E4 | 65.0 | 65.0 | 0.00 | 0.00 | *** | *** | |
| 16 | X6 | A5 | 42.0 | 42.0 | 0.00 | 0.00 | *** | *** | |
| 17 | X7 | B5 | 25.0 | 25.0 | 0.00 | 0.00 | *** | *** | |
| 18 | X8 | C5 | 40.5 | 40.5 | 0.00 | 0.00 | *** | *** | |
| 19 | X9 | D5 | 49.0 | 49.0 | 0.00 | 0.00 | *** | *** | |
| 20 | X10 | E5 | 65.5 | 65.5 | 0.00 | 0.00 | *** | *** | |
| 21 | X11 | A6 | 54.0 | 54.0 | 0.00 | 0.00 | *** | *** | |
| 22 | X12 | B6 | 27.0 | 27.0 | 0.00 | 0.00 | *** | *** | |
| 23 | X13 | C6 | 36.0 | 36.0 | 0.00 | 0.00 | *** | *** | |

The left navigation bar contains icons for 'Raw Data', 'Report Table', 'Standard Curve', and 'Graphs'. The 'Standard Curve' icon is circled in red, and a line points from the text 'Standard Curve' to it.

2. Select “Apply across all analytes” and click Optimize.



- Review the optimization report and identify any analytes for which there are comments or that have not been successfully optimized.



It will be difficult to generate meaningful results if many of your unknowns do not fall within the usable range of the curve, that is, between the lower limit of quantitation (LLOQ) and the upper limit of quantitation (ULOQ). Values between the LLOQ and background fluorescence and values above the ULOQ can be interpreted qualitatively.

Analyzing Your Data Using Other Software

You can export your data to other applications to group biological replicates for further analysis.

To analyze your data

1. Click Report Table in the navigation bar.
2. Click “Export results to Bio-Plex Data Pro” to view your results in Bio-Plex Data Pro™, or click Export Report Table to view your results in Microsoft Excel.

Report Table

Export results to Bio-Plex Data Pro

Export Report Table

| | Type | Well | FI | FI - Bkgd | Std Dev | %CV | Conc in Range | Obs Con |
|----|------|-------|---------|-----------|---------|------|---------------|---------|
| 1 | S1 | A2,A3 | 18652.3 | 18652.3 | 1476.09 | 7.91 | *** | |
| 2 | S2 | B2,B3 | 19057.8 | 19057.8 | 295.22 | 1.55 | *** | |
| 3 | S3 | C2,C3 | 19087.0 | 19087.0 | 22.63 | 0.12 | *** | |
| 4 | S4 | D2,D3 | 11898.5 | 11898.5 | 522.55 | 4.39 | *** | |
| 5 | S5 | E2,E3 | 5238.5 | 5238.5 | 108.19 | 2.07 | *** | |
| 6 | C1 | A1 | 16989.0 | 16989.0 | 0.00 | 0.00 | *** | |
| 7 | C2 | B1 | 22111.0 | 22111.0 | 0.00 | 0.00 | *** | |
| 8 | C3 | C1 | 19723.5 | 19723.5 | 0.00 | 0.00 | *** | |
| 9 | C4 | D1 | 12172.0 | 12172.0 | 0.00 | 0.00 | *** | |
| 10 | C5 | E1 | 5027.0 | 5027.0 | 0.00 | 0.00 | *** | |
| 11 | X1 | A4 | 52.0 | 52.0 | 0.00 | 0.00 | *** | |
| 12 | X2 | B4 | 25.0 | 25.0 | 0.00 | 0.00 | *** | |
| 13 | X3 | C4 | 43.5 | 43.5 | 0.00 | 0.00 | *** | |

4 Maintaining the MAGPIX Instrument

This chapter describes the periodic maintenance that must be performed on the MAGPIX instrument to keep it working according to the manufacturer's specifications.

Daily Maintenance

Each day you use the MAGPIX instrument, perform these maintenance tasks:

- **At the beginning of the day** — at the beginning of each day you use the instrument, run the recommended routine. Check the Recommended Routine section in the Maintenance view. On most days this is the Daily Start Up routine.
- **At the end of the day** — at the end of each day you use the instrument, run the Shut Down routine.

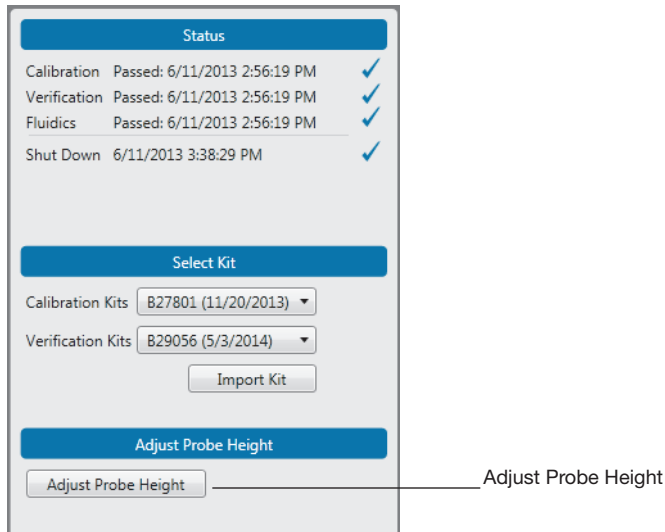
Weekly Maintenance

Clean the sample probe once a week to keep it free of any debris. Whenever you remove the sample probe from the probe assembly, you must recalibrate the probe before you read another plate. Therefore, cleaning the sample probe must always be followed up with running the Adjust Probe Height maintenance routine.

Cleaning the Sample Probe

To clean the sample probe

1. Turn off the MAGPIX instrument and unplug the power cord.
2. Remove the sample probe.
3. Use either or both methods to clean the sample probe:
 - Bath sonicator — place the tip of the sample probe in the bath sonicator for 2–5 min.
 - 10 ml syringe — force distilled water through the tip of the sample probe to its large end.
4. Replace the sample probe. Screw the black fitting on top of the sample probe until it clicks.
5. From the Maintenance view, run the Adjust Probe Height procedure.



MAGPIX Maintenance

Within the first year of use, Bio-Rad recommends that you perform the 6-month and 12-month maintenance. The maintenance kits are:

- Bio-Plex[®] MAGPIX[™] 6-Month Preventive Maintenance Kit — cleans the air filters and replaces the syringe seals (catalog #171-012010).
- Bio-Plex MAGPIX 12-Month Preventive Maintenance Kit — replaces the sample probe tube and the drive fluid filter (catalog #171-012012).

A License Activation

To have access to all of the features of Bio-Plex Manager™ MP software, you must activate the product with a valid product license. You will need a separate license for each computer on which you install Bio-Plex Manager MP.

Note: If you purchased a new MAGPIX instrument, the computer included with the instrument comes with the software already activated. Therefore, you can skip this step.

Activating the Bio-Plex Manager MP License

You can activate the product either online (if you have access to the Internet) or through Technical Support (if you do not have Internet access).

Note: To activate your license, you will need the product activation code, which can be found in the Bio-Plex Manager MP CD folder.

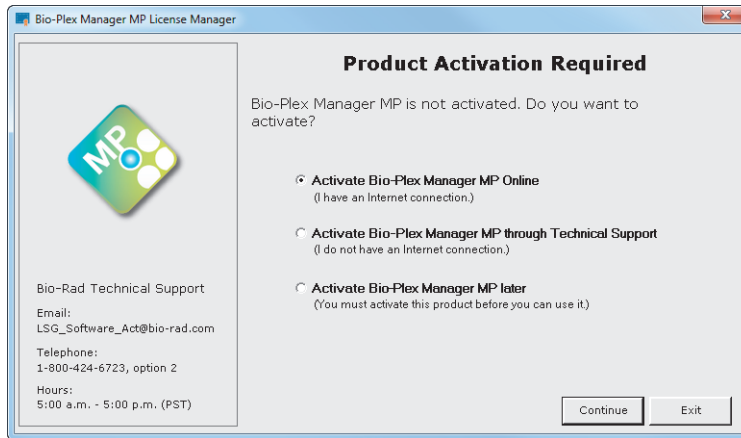
Activating the License Online

Follow the procedure below if the computer on which Bio-Plex Manager MP is installed has an Internet connection. With this method, the software uses your activation code to automatically activate your software.

To activate Bio-Plex Manager MP online

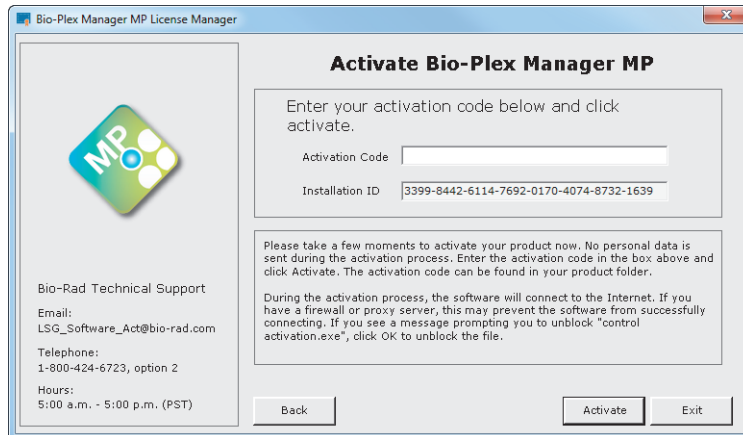
1. Start the Bio-Plex Manager MP software.

2. If the product license has not been activated, the Product Activation Required window appears.

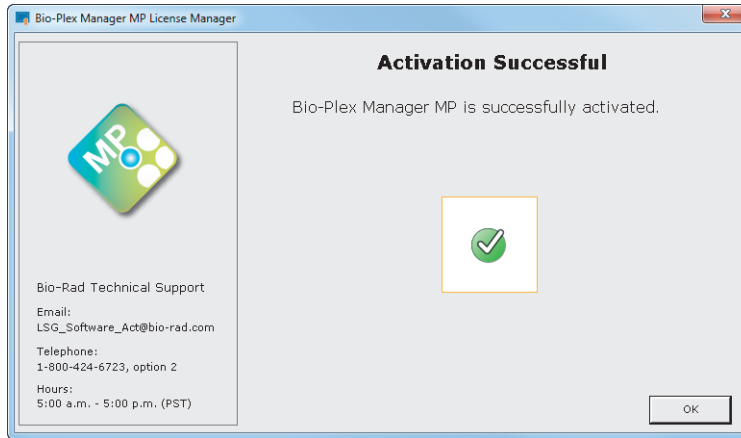


3. Select Activate Bio-Plex Manager MP Online and click Continue.
4. Enter your activation code in the text box and click Activate.

Note: The activation code can be found in the CD folder.



The Activation Successful window appears confirming that the software has been activated.



5. Click OK to exit the activation software and start Bio-Plex Manager MP.

Activating the License through Technical Support

If the computer on which Bio-Plex Manager MP is installed does not have an Internet connection, you can request a product license from Bio-Rad Technical Support to activate the software. This is a two-phase process:

1. Generate a credentials file and email it to Technical Support.

Technical Support uses the credentials file to generate a license and emails the file back to you.

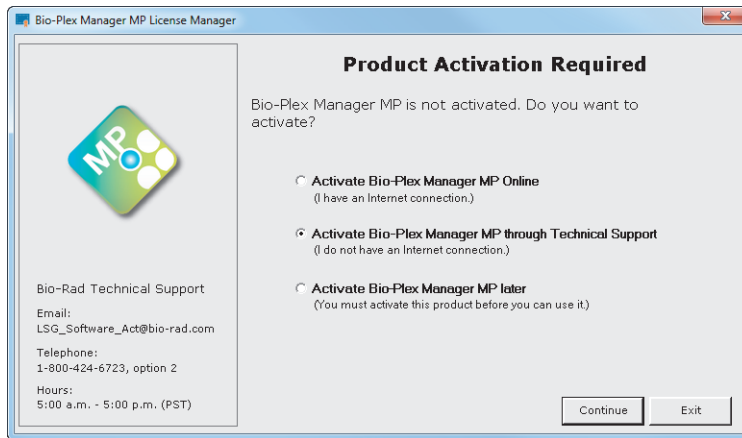
2. Use the license file to activate your software.

The procedures that follow describe this two-phase process.

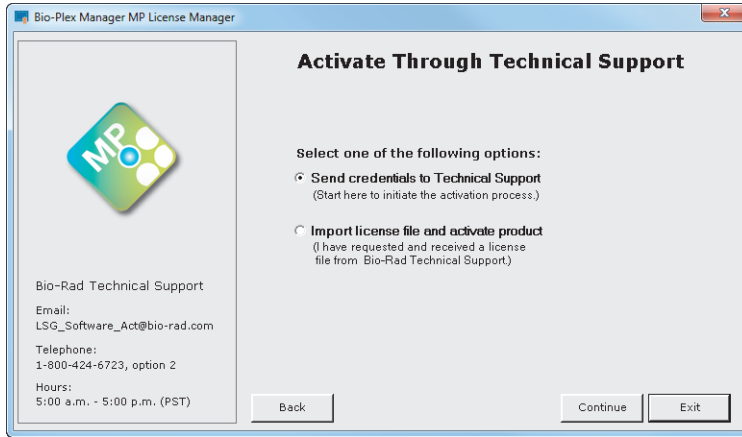
Generating the Credentials File

To generate the credentials file

1. Start the Bio-Plex Manager MP software.
2. If the product license has not been activated, the Product Activation Required window appears.
3. Select **Activate Bio-Plex Manager MP through Technical Support** and click **Continue**.

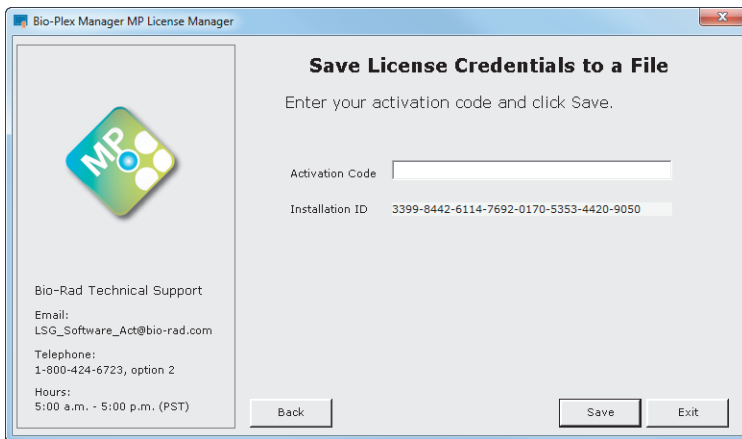


4. Select Send credentials to Technical Support and click Continue.



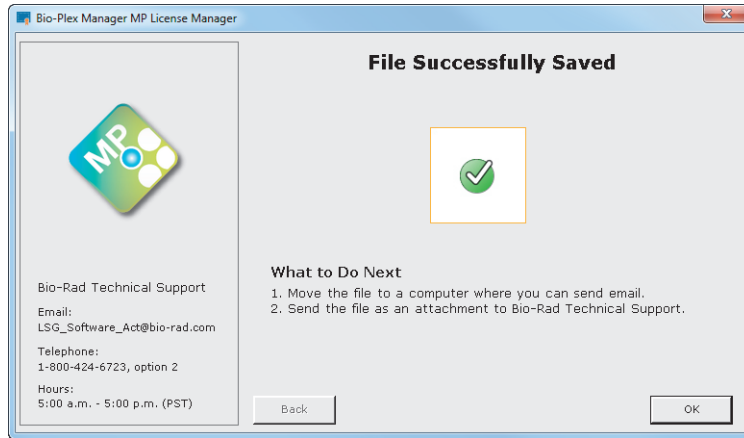
5. Enter your activation code in the text box and click Save.

Note: The activation code can be found in the CD folder.



6. In the Save Licensing Credentials to a File dialog box, enter the name of the file and click Save.

The File Successfully Saved window appears with instructions on how to send the credentials file to Technical Support.



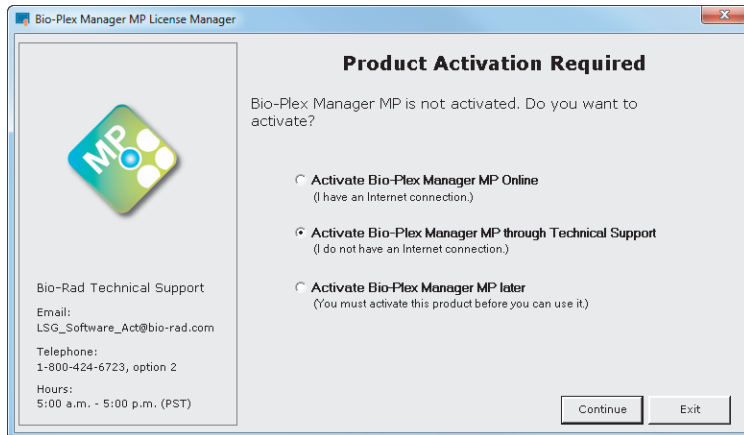
7. Move the credentials file to a computer where you can send email, and email the file to Bio-Rad Technical Support (LSG_Software_Act@bio-rad.com).

Activating the Software with a License File

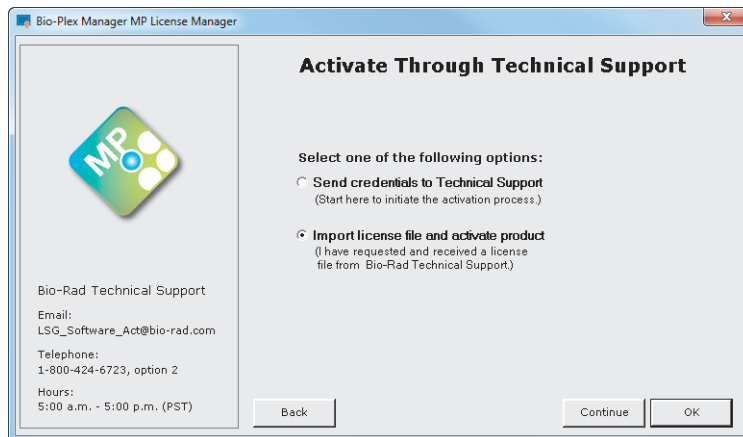
Technical Support will generate a file with the license and email the file to you. When you receive the email, transfer the file to the computer where Bio-Plex Manager MP is installed. The file can be copied to a local hard drive, flash drive, or network drive.

To activate Bio-Plex Manager MP with the license file

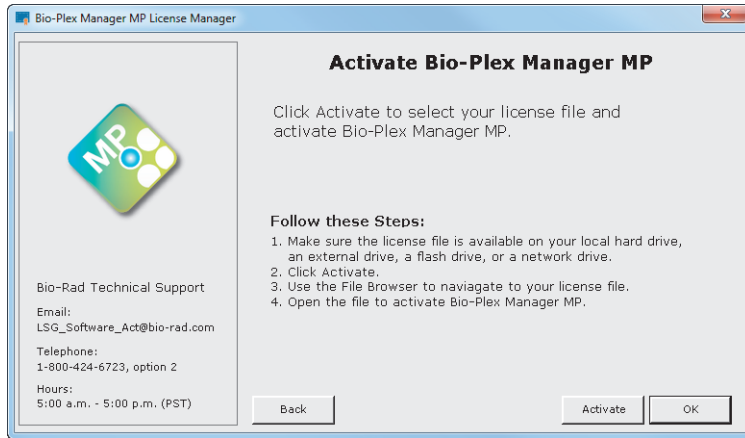
1. Start the Bio-Plex Manager MP software.
2. In the Product Activation Required window, select Activate Bio-Plex Manager through Technical Support and click Continue.



3. Select “Import license file and activate product” and click Continue.

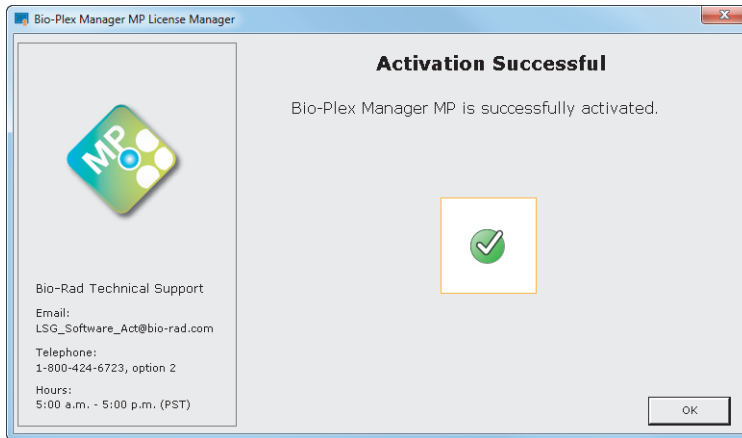


4. Click Activate.



5. Navigate to where the license file is located, select the file, and click Open.

The Activation Successful window appears confirming that the software has been activated.



6. Click OK to exit the activation software and start Bio-Plex Manager MP.



BIO-RAD

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Laboratories, Inc.**

*Life Science
Group*

Web site www.bio-rad.com **USA** 800 424 6723 **Australia** 61 2 9914 2800 **Austria** 01 877 89 01
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