OPTIMA

Software Manual – Part I: Installation

Version 2.20

This manual was designed to guide OPTIMA users through the software features.

Although these instructions were carefully written and checked, we cannot accept responsibility for problems encountered when using this manual. Suggestions for improving this manual will be gratefully accepted.

BMG LABTECH reserves the right to change or update this manual at any time. The Revision-Number is stated at the bottom of every page.

Headquarters
Germany
BMG LABTECH GmbH
Hanns-Martin-Schleyer Str. 10
77656 Offenburg
Phone: +49 781 96968-0
Fax: +49 781 96968-67
germany@bmglabtech.com

Subsidiaries

Australia
BMG LABTECH Pty. Ltd.
P.O. Box 469
Mount Eliza, Victoria 3930
Phone: +61 3 5973 4744
Fax: +61 3 5973 4711
australia@bmglabtech.com

France
BMG LABTECH SARL
7, Rue Roland Martin
94500 Champigny s/ Marne
Phone: +33 1 48 86 20 20
Fax: +33 1 48 86 47 07
france@bmglabtech.com

Japan
BMG LABTECH Japan Ltd.
2F TS-1 Building, 1-6-2, Shimo-cho
Omiya-ku, 330-0844
Saitama City, Japan
Phone: +81 48 647 7217
Fax: +81 48 647 7218
japan@bmglabtech.com

United Kingdom
BMG LABTECH Ltd.
P.O. Box 73
Aylesbury, HP 20 2 QJ
United Kingdom
Phone: +44 1296 33 66 50
Fax: +44 1296 33 66 51
uksales@bmglabtech.com

USA
BMG LABTECH Inc.
2415 Presidential Dr.,
Bldg. 204, Suite 118
Durham, NC 27703
Phone: +1 919 806 1735
Fax: +1 919 806 8526
usa@bmglabtech.com

TABLE OF CONTENTS

1 Installation

1.1 System Requirements

- Computer with Pentium CPU (we recommend Intel Pentium 4 or higher with at least 2 GHz clock rate)
- Minimum 256 MB RAM (we recommend 1 GB or higher, especially when you are using Windows XP or Vista)
- One free serial communication port
- 400 MB free hard disk memory for software installation
- Microsoft Windows 98 / ME or Windows NT / 2000 / XP / Vista
- Excel 97 / 2000 / 2002 / XP / 2003 for data reduction (when using the BMG LABTECH Evaluation software, not necessary when using the BMG LABTECH's new generation Data Analysis software)

1.2 Software Structure

There are two parts to the Omega software: the Control part and the Data Analysis part.

The control software is necessary for configuring the instrument, for setting up test parameters and for executing measurement procedures. The control software can store the measurement data in dBase and/or ASCII format.

The data analysis software exists in two different versions: 1. an Excel based software called OPTIMA Evaluation Part and the new generation BMG LABTECH Data Analysis software MARS (not Excel based).

Both data analysis software packages can be used to perform all kinds of data processing. It is possible to install both analysis software packages on one computer and to decide later which version you want to use.

In a few words: the control software is used to get the results and the data analysis software is used to look at them.

It is possible to install the control and data analysis parts onto two different computers, e.g. the control part onto a computer in the laboratory and the data analysis part onto a computer in an office. By storing the measurement data onto a network drive you would be able to perform the data processing in your office instead of the laboratory. You do not need to install BMG LABTECH's Data Analysis software if you want to use a different Data Analysis software or if you want to use a LIMS.

The software needs to be installed in the following order:

1. Excel *   **2. Control Software**   **3. MARS Data Analysis** and/or **OPTIMA Evaluation**

* Only necessary if you want to use the Excel based Evaluation software.

Please follow the next set of instructions carefully to ensure proper installation of the software.

1.3 Upgrading

Please go to the next chapter if there is not a previously installed version of the OPTIMA or FLUOstar OPTIMA software (The OPTIMA software is the successor of the FLUOstar OPTIMA software.).

Before installing a new software version over an existing version, it is recommended to export (or to backup) your test protocols and microplate definitions (if any changes are made) and to export your measurement data. You will find the export function in the test selection window ('Test Setup | Test Protocol') for test protocols. Use 'Setup | Microplates' for microplate definitions. Select all the definitions you would like to export and click the '**Export**' button. To export measurement data of already performed test runs, use the data analysis or evaluation part of the software (see Software manual part III).

The data base format for the **user data base** has been changed since version 1.20-0; the format of the **measurement results data base** and of the **test protocols data base** has been changed since version 2.00. If you perform the installation using the Smart Update mode (or if you use the Custom Installation mode without selecting the groups "User Data Base", "Test Protocols" and "Measurement Data"), the format of the existing data bases will be converted automatically. Please use the Custom Installation mode if you want to replace the installed data bases.

The format for the **microplate definitions** has changed with version **2.00**. If you install the software using the Smart Update mode (see below), the microplate data base will be replaced. If you want to keep existing microplate definitions, please use a custom installation and deselect the group "Microplate Definitions". The data base format will then automatically be converted.

Notes: The installation program will create a backup of the existing test protocols, the user database, the filter table, microplate definitions and measurement data when the data base format has been converted or files have been replaced during the upgrade procedure. At the end of the installation procedure there will be a window telling you where to find the backup files. As long as the database format has not been changed (see above) it is possible to copy the backup files back to their original directory (in case you want restore previous data). But if there has been a format change, you can only use the backup files after re-installing the old program version.

For complete removal of an old software version see chapter 1.8. De-installation of a former version is generally not necessary, you can install the new version directly over an existing version.

1.4 Excel Installation

The installation of Excel is only necessary if you want to use the Excel based Evaluation software (not for BMG LABTECH's new generation data analysis software M.A.R.S.). The Excel software should be installed prior to the OPTIMA software. There are certain components that must be included in the installation. If Excel 97 / 2000 / 2002 / XP / 2003 has not been previously installed, follow the instructions below for complete installation. If Excel 97 is already installed, follow the instructions below to ensure the necessary components have been installed. It is not possible to use Excel 2007 together with the OPTIMA Evaluation software!

- **Complete installation of Excel 97 / 2000 / 2002 / XP / 2003**

- Start the Office or Excel installation program.

- Choose Custom or Complete Installation - this option installs all Excel components.

    Be sure that all components are ticked (you can be sure of this if click on select all).

- The Excel wizard will ask for the directory. The default directory is ~:\Program Files\Microsoft Office.

    If an older version of Excel already exists, a new directory should be created to prevent a conflict between the two Excel versions.

- Click on 'OK' to install.

- **If Excel 97 already exists on the PC**

- Start the Office or Excel installation program.

- Choose add/remove components.

- In the section Microsoft Excel Program files select 'Change option' | 'Add-ins' | 'Change option' | select: 'Solver and analysis tool pack' | press 'OK'.

- Than choose: 'Data Access' | 'Change Options' | select 'Data Access Objects for Visual Basic' | select: 'Data Base Driver' | 'Change Option' | select: 'All' | press 'OK'.

A standard installation of Excel 2000 / 2002 / XP / 2003 should contain all necessary parts (This might not be true for small business editions.).

Note: Excel installation should be prior to the OPTIMA software installation or run time errors can occur. If it is ever necessary to reinstall Excel it can be necessary to reinstall the OPTIMA software.

1.5 Installation Menu

Place the CD into the CD ROM drive. This should start the program automatically, but if CD auto start is disabled, then execute the program '**Start**' from the CD drive. An installation directory will appear:

From this install menu you can start the installation of the control and the data analysis / evaluation part of the OPTIMA program, you can install the optional Stacker Control software or you can read the manuals online.

Note: If you are using Windows NT, 2000, XP or Vista, it is necessary that the installation is performed by a user with administrative rights.

1.6 Control Software - Installation

Click on '**Install Control Software**' and follow the instructions from the installation wizard.

1.6.1 Welcome Screen

It is possible to install this program more than once (see chapter 2 Using Multiple Installations). You can create up to 9 program installations. This will be useful if more than one reader is connected to one computer.

If the OPTIMA software is already installed on your computer, you can choose whether you want to upgrade/repair an existing installation or whether you want to create a new installation. If you already have installed an older OPTIMA / FLUOstar OPTIMA software version please perform an upgrade of the existing (first) installation first, otherwise create installation number one by performing a standard full installation (see below). To create a new installation (instance) please start the control software installation again. In the welcome screen you should now select 'Create a new program installation (#2)'.
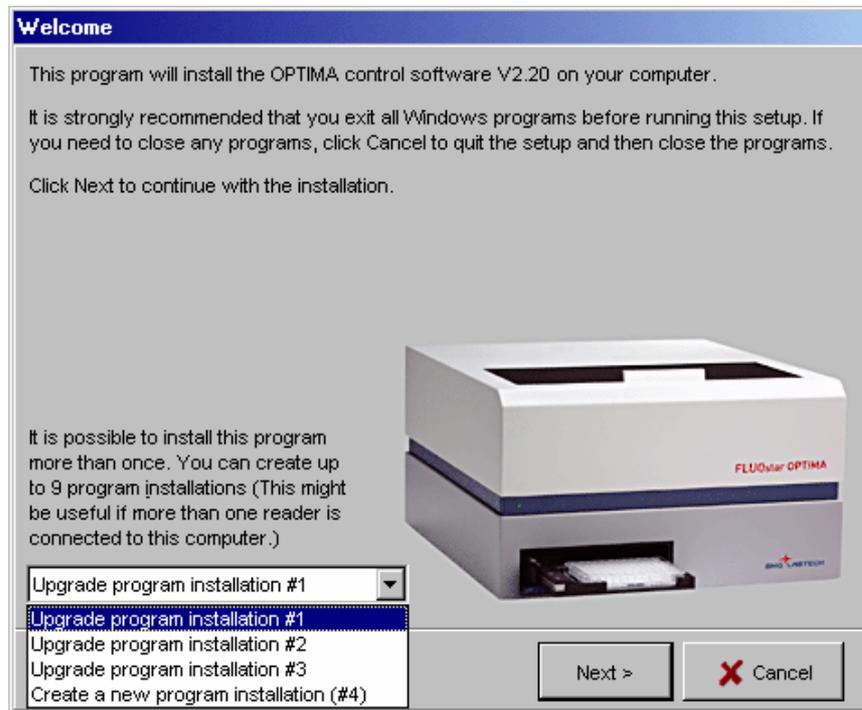
1.6.2 Setup Type

Using the next screen you can select the setup type:
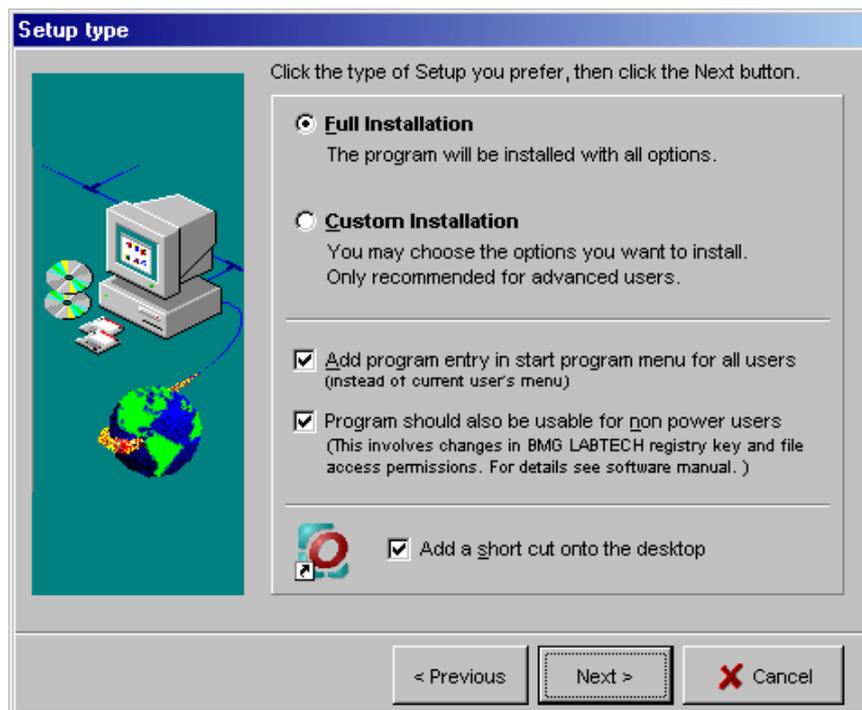
If this is the first installation of the OPTIMA software, you can choose either **Full Installation** or **Custom Installation**:

- Full installation will install the programs with all options. This is the installation option recommended for most users.

- Custom installation allows you to choose the options you want to install and is recommended for advanced users.

You can choose whether you want to add the program entry in the **start menu for all users** or in the section for the current user only.

You may also decide whether the **program should be usable for non-power users**. If you do not check this box, the program might not be usable for non-power users (depending on the operating system or the current setting of the system policies on your computer: beginning with Windows 2000 Microsoft changed the default access permissions for some registry keys and newly installed program files in a way that a non-power user is, by default, not able to use most newly installed program other than some Microsoft certified programs). When you use this option, the access permission is changed for the BMG LABTECH registry keys and files to enable program usage for all users. For more information about access rights see chapter *Known Problems and Solutions* in Software manual part II.

1.6.3 Smart Update

When you update from a previous version, you might decide between **Smart Update** and **Custom Installation**:
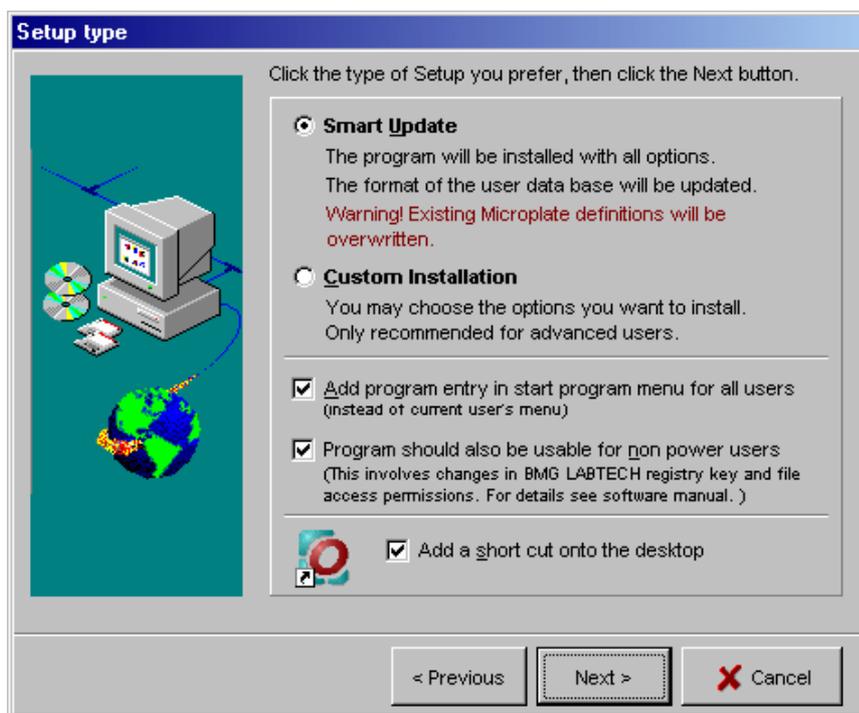
Using the Smart Update mode none of the existing user, filter, test protocol or measurement result data bases will be overwritten. If there has been a data base format change between the installed and the new version, the existing data bases will be automatically converted and a backup of the old files will be created. By default, only the microplate data base will be replaced, as BMG LABTECH might have added new microplate types. Please use the Custom Installation mode and deselect the 'Microplate Definitions' group, if you want to keep the existing microplate definitions. You should also use the Custom Installation mode if you want to replace any of the other data bases.

1.6.4 Custom Installation

If you use the custom installation mode, the next window displays a list of the components that can be installed.

By selecting an item with a single mouse click, you can obtain a description of the individual software component. You can then decide if this feature needs to be installed. If the data base format of a group, which has not been selected, has been changed, it will automatically be updated.
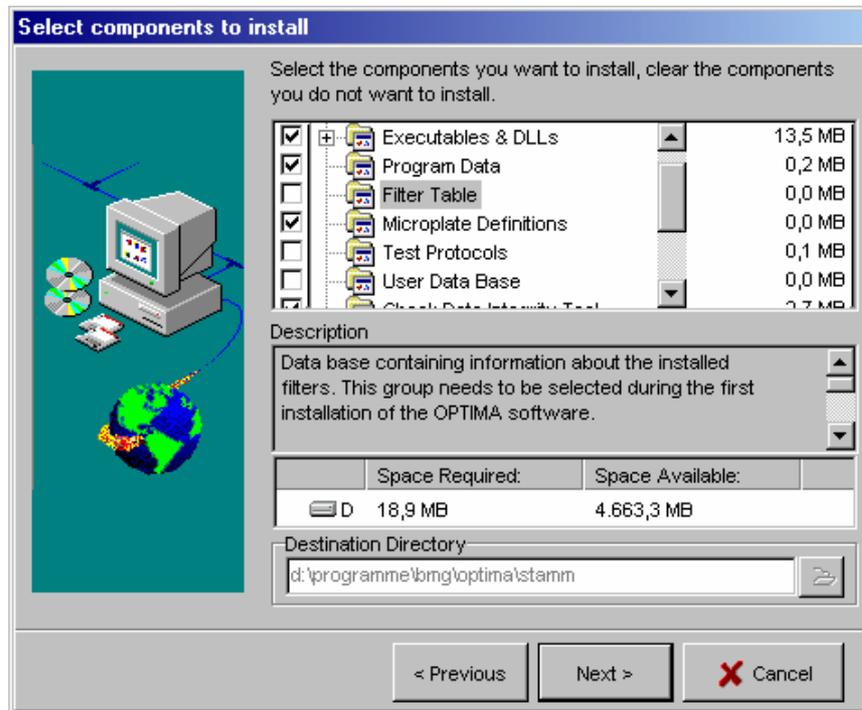
1.6.5 Reader Type Pre-Selection

During the installation you will be asked for the type of reader you want to use. The OPTIMA software can be used together with FLUOstar OPTIMA, LUMIstar OPTIMA and POLARstar OPTIMA readers. Depending on the reader type test protocols using different measurement methods can be defined and executed. The selection you make here is only used as a pre-selection for the software. If the reader is connected and switched on the control part of the software will automatically recognize the correct reader type. If there is no connection to a reader, you can select the reader type using the menu command 'Setup | Reader Type' (see software manual part II: Control Software).
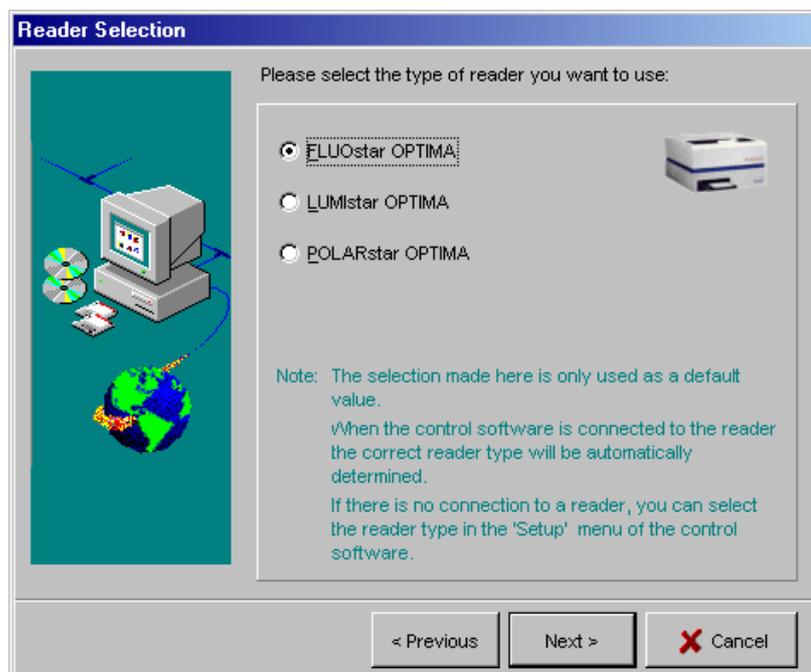
1.6.6 Backup files

The installation program will create a backup of the existing test protocols, the user database, the filter table, microplate definitions and measurement data when performing an upgrade if files have been replaced or if the data base format has been changed. At the end of the installation procedure there will be a window telling you where to find the backup files.
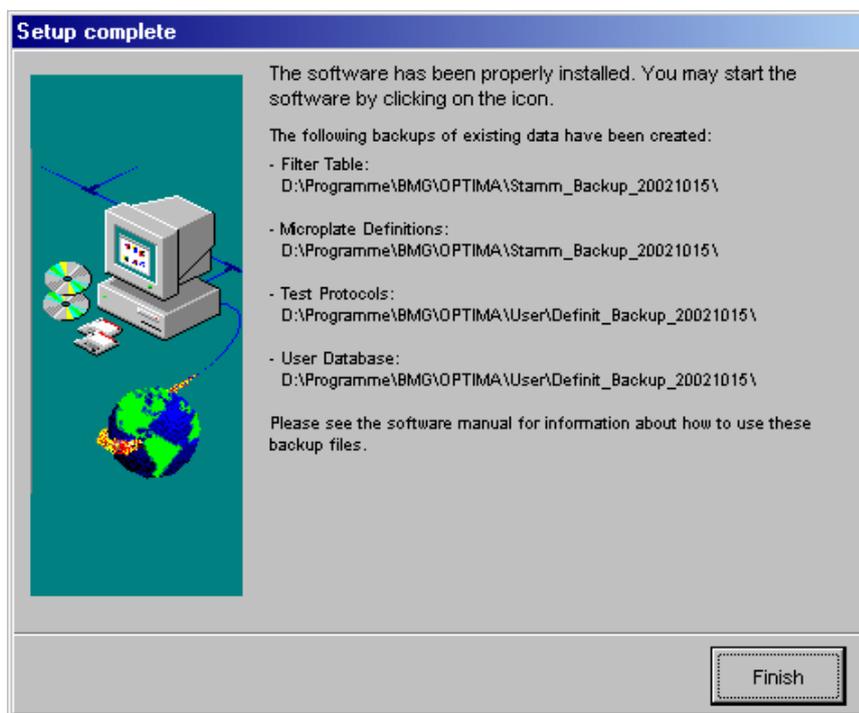
As long as the database format has not been changed (see chapter 1.3 *Upgrading*) it is possible to copy the backup files back to their original directory (in case you want restore previous data). But if there has been a format change, you can only use the backup files after re-installing the old program version.

1.7 MARS Data Analysis or Evaluation Software - Installation

After installation of the control software, the main menu will reappear. Click 'Install MARS' to install the BMG LABTECH's new generation Data Analysis software of click 'Install Evaluation Software' to install the Excel based Evaluation software. Follow the instructions of the installation wizard to install the software (the installation procedures and options are similar to the control software installation, see above). It is possible to install both data reduction parts onto one computer.

When the Evaluation software in Excel is opened for the first time, the following screen might appear:
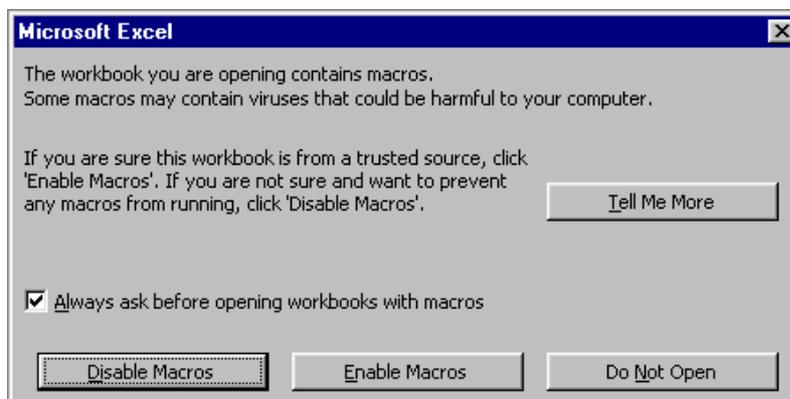
Deactivate the question 'Always ask before opening the workbooks with macros' by clicking on the box in front of the above statement. Then click on '**Enable Macros**'. The macros are safe for the computer.

For further details of macro security and the certification of macros, see Software manual part IIIb.

There are several bugs associated with Microsoft programs that effect the OPTIMA software. If error messages appear when the OPTIMA software is opened for the first time, please refer to the *Known Problems and Solutions* chapter of the Software manual part IIIb for bug fixes.

1.8 Uninstalling the OPTIMA Software

An uninstall program has been included in the software package which allows you to delete all components of the OPTIMA software and all registry entries belonging to it.

Select 'Start │Settings │Control Panel │Add/Remove Software'.

Select '**OPTIMA**' and click on '**Remove**'. In the '**Remove OPTIMA**' window, click on '**Start**'. This will de-install the control software.
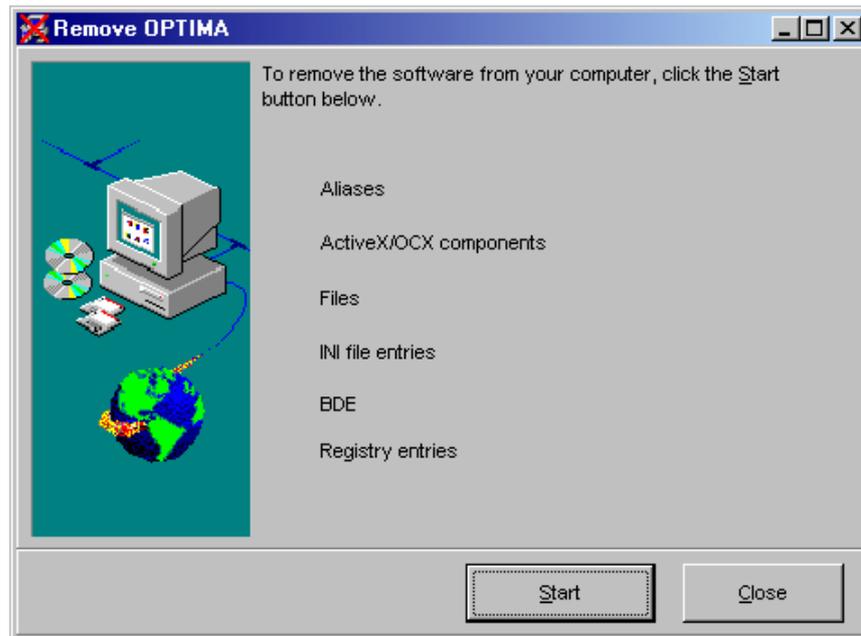
To de-install the data analysis software Select '**BMG LABTECH MARS Data Analysis**' and click on '**Remove**'. In the '**Remove BMG LABTECH MARS Data Analysis**' window, click on '**Start**'. Please note: the data analysis software might also be used for other BMG LABTECH readers, not only for the OPTIMA.

2 Using Multiple Installations

It is possible to install the control part of the OPTIMA program more than once. You can create up to 9 program installations. This will be useful if more than one reader is connected to one computer. Please see chapter 1.6 *Control Software - Installation* for a description how to create a new installation. If you have created more than one installation you will find a separate desktop icon and a separate start menu entry for each installation:
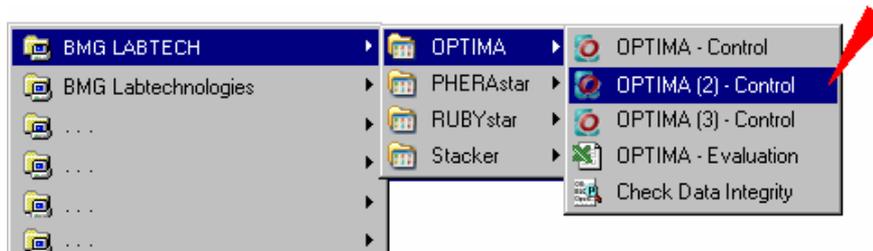
You can use the different program installations totally independently. All settings, e.g. the communication port to be used, the test protocols and the measurement data will be stored independently. The program installation (instance) number 2 to 9 will show the installation number in the caption of the main program window and of the login screen.
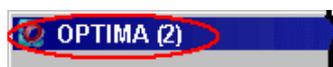
This number will also be displayed in the Windows task bar.

BMG LABTECH's new generation Data Analysis software MARS needs to be installed only once; nevertheless, it is possible to use this one installation to perform data reduction tasks for data created by all control part installations. A start menu entry and a desktop icon will automatically be created for each existing (control part) installation.

The Excel based evaluation part can be installed only once, nevertheless it is possible to use this one installation to perform data reduction tasks for data created by all control part installations. You just need to setup accounts in installation number one using the different data directories, e.g. create a user called 'USER2' with 'c:\Program Files\BMG\OPTIMA2\User' as root directory to access the data created by control part installation number 2.

If you use the ASCII export function, you can define the target directories independently in all program installations.

3 Support

If you have any problems / questions regarding the software / the instruments, you should visit our web page (http://www.bmglabtech.com) and read the information on the Support page. If you can not find an answer there, please contact BMG LABTECH using the following email addresses:

- Problems / questions regarding software:
  support@bmglabtech.com

- Problems / questions regarding the instruments:
  tech.service@bmglabtech.com

You can also use our on-line bug report form:
http://www.bmglabtech.com/support