Electrothermal
A Bibby Scientific Company

Integrity Software

STEM 'INTEGRITY' Control Instruction Book.

(PC Control reaction Station Software).

Please take your time to read this Instructions book in order to understand the safe and correct use of your new Bibby Scientific 'INTEGRITY' software.

It is recommended the Responsible Body for use of this equipment reads this Instruction book and ensures the user(s) are suitably trained in its operation before using it with Bibby Scientific product.

Table of Contents.

To Setup and use your Integrity Reaction Station please refer to Instruction book supplied with the product.

This product is manufactured in Great Britian by Electrothermal, part of the Bibby Scientific Group of companies.

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1. INTRODUCTION.

1.1. 'INTEGRITY' is a professionally advanced application which represents a true milestone in Integrity Reaction Station control. With an incredibly 'user friendly' interface, this software makes your Integrity a truly evolutionary workhorse providing accuracy in all aspects of temperature and stirring control, whether you are working with solubility, crystallisation or chemical reaction, results can be saved and stored and together with many technological features such as the 'Solubility curve generator' and, state of the art Import / Export functions, this application will advance your laboratory processes for many years.

1.2. Additional accessories which customise your Integrity processes are fully supported such as Infra Red probe for particle measurement and Multi Temp for contents temperature control. The platform has been laid down to support and integrate future accessories as they evolve ensuring your processes benefit from all the latest technological advances as they happen.

1.3. Experiment data features include the facility to show boiling points, calculations, and a solvent list, while a scheduler allows for batch control parameter setting. Solubility functions include a profile generator and the calculation of curves from the temperature steps from initial data. Further more, this application supports the creation of solubility / crystallisation profiles which are enhanced with the ability to control syringe pumps which automatically change concentration.

1.4. While an experiment is running you have the ability to pause and / or edit a profile during a run. The facility exists to have multiple users when cell positions are vacant. You may view real time data, both as a raw file or in graphical format. An emergency stop function is provided for that quick system shut down for those accidental moments and a cell lock feature is provided to prevent a running experiment from being disrupted while setting up another cell.

2. SYMBOLS AND USING THIS INSTRUCTION BOOK

2.1. Throughout this Instruction book and on you Integrity product the following symbols are shown to identify conditions which pose a hazard to the user or to identify actions that should be observed. These symbols are also shown on the product, or its packaging. When a symbol is shown next to a paragraph or statement it is recommended the user takes particular note of that instruction in order to prevent damage to the equipment or to prevent injury to one's self or other people.

The Responsible Body and the Operator should read and be familiar with this Instructions book in order preserve the protection afforded by the equipment.

To prevent injury or equipment damage it is the manufacturer's recommendation that all persons using this equipment are suitably trained before use.

2.2. Symbols defined.

'INTEGRITY' Application Symbols.

Caution. See note or adjacent symbol.
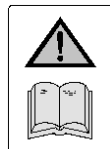
Caution / risk of electric shock

Recyclable Packing Material

Do not dispose of product in normal domestic waste.

Caution. Hot surface.

Refer to Operator Instructions book.

Bio Chemical Hazard. Caution required. Will require decontamination.

3. SAFETY INFORMATION FOR USING YOUR INTEGRITY PRODUCT.

3.1. This product has been designed for safe operation when used as detailed in accordance with the Manufacturer's instructions.

NOTE: Failure to use this equipment in accordance with the manufactures operating instructions may compromise your basic safety protection afforded by the equipment and may invalidate the warranty / guarantee. The warranty / guarantee does not cover damaged caused by faulty installation or misuse of the equipment.

3.2. Prevention of Fire and Electric Shock.

To prevent a risk of fire or electric shock, **DO NOT** open the Integrity or PSU case without authorisation. Only qualified Service personnel should attempt to repair this product

Ensure the Mains Power Supply conforms to rating found on the data plate located on the side of the PSU.

Never Operate Integrity equipment without connection to earth / ground. Ensure the mains supply voltage is correctly earthed / grounded in accordance with current area legislation.

3.3. General Safe Operating Practice.

"Always follow good laboratory practice when using this equipment. Give due recognition to current health and safety legislation (including Guidelines and Approved Codes of Practice), your company's health and safety procedures and all other associated legislation / regulatory requirements applicable to your areas of operation.
Check laboratory procedures for substances being heated and ensure all hazards (**e.g. explosion, implosion or the release of toxic or flammable gases**) that might arise have been suitably addressed before proceeding. When heating certain substances the liberation of hazardous gases may require the use of a fume cupboard or other means of extraction.

Ensure equipment is used on a clean, dry, non-combustible, solid work surface with at least 300mm suitable clearance all around from other equipment.

Ensure the PSU is positioned on a clean, dry, non-combustible surface with a sufficient space for the power cable to Integrity and mains input lead and plug set to enter / exit without undue bend stresses. Ensure a suitable clearance for air flow and heat dissipation.

Do not position the Integrity so that it is difficult to connect / disconnect from the power cable assembly.

Do not position the Integrity so that it is difficult to connect / disconnect from the coolant fluid supply.

Do not position the Integrity so that it is difficult to connect / disconnect data and communication cables.

Do not position the PSU so that the on / off switch is inaccessible.

Do not immerse any part of this equipment in water / fluid.

Do not spill substances onto this product. If spillage does occur, disconnect unit from mains supply and follow instructions as detailed in Section 'Maintenance'.

⚠ **Do not** cover the Integrity or PSU whilst in use.

⚠ It is **not** recommended to leave any heating apparatus unattended during operation.

⚠ The equipment is not spark, flame or explosion proof and has not been designed for use in hazardous areas in terms of BSEN 60079-14:1997. Keep flammable, low flash point substances away from the apparatus.

⚡ **Do not** operate or handle any part of this product with wet hands.

⚠ **Do not** touch the heating surface whilst in use.

⚠ **Do not** lean or stretch over equipment.

⚠ Keep the Mains Plug and Lead set cable away from the heating surface.

⚠ **Caution!** : Always ensure that when using an external probe for temperature control that it is correctly located in the required cell position before starting a programmed run.

4.   UNPACKING. ('INTEGRITY' Application).

Please Note:

By opening this box and breaking the security seal you have accepted the contents of this package. Bibby Scientific will not accept this product by way of return unless it is faulty. This does not affect your statutory rights under country specific law.
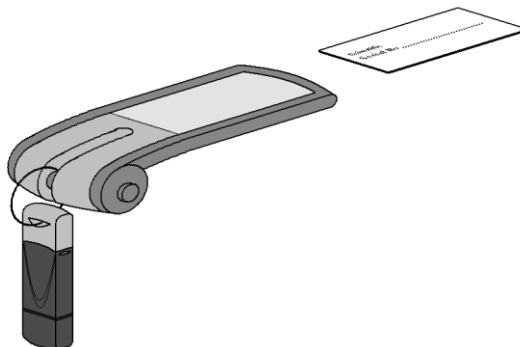
4.1. Please check the contents of your package.
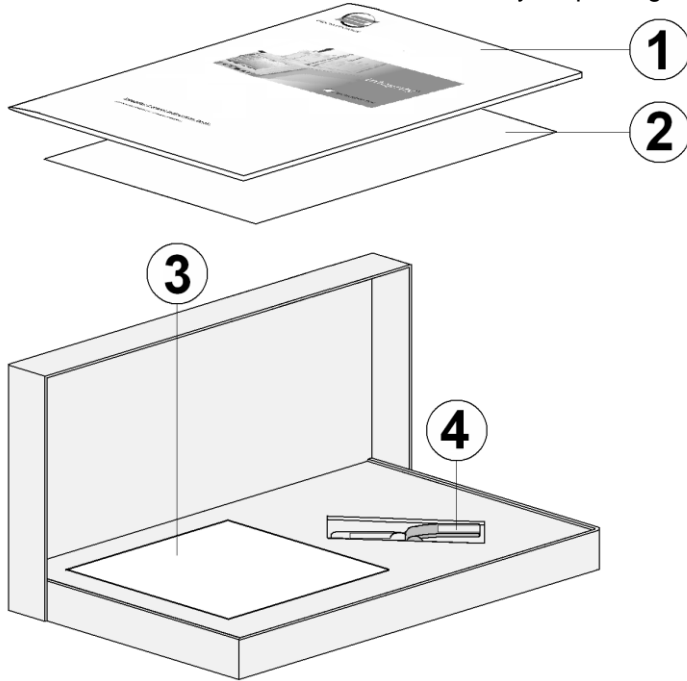
Item	Description	Qty
1	Instruction Book (M7979)	1
2	Warranty registration card.	1
3	Application Software CD	1
4	'INTEGRITY' Dongle Key	1

Please fill out the Warranty registration card and post it to Bibby Scientific.
See section 20. Customer Support.

Please write the product serial number on the Integrity Dongle key fob.

For your future reference please record your 'INTEGRITY' Licence number.	'INTEGRITY' Licence Number.

5. MINIMUM PC SPECIFICATION.

The minimum P.C. Hardware requirements recommended for this application are as follows:

|	
Processor	Pentium 4 or above.
RAM	500MB or above.
App Disk Space	200MB or above
Disk Space	30 GB or above
Graphics Card	64 MB or above
Screen Resolution	1024 x 768 or greater.
CD Rom Drive	To load application
USB connectivity.	To support Hardware Key
RS232 / 485 port / USB	Connection for INTEGRITY Reaction Station.

In addition the PC must host Windows XP Service Pack 2 or above

6. INTEGRITY PC SOFTWARE INSTALLATION.

Note: Before installation of 'INTEGRITY' ensure Microsoft net framework 2.0 or above is set up on your computer.
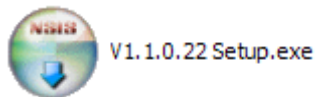
Ensure all previous versions of 'INTEGRITY' software via the '*add or remove software*' function in control panel have been uninstalled and deleted.

Insert CD into PC.
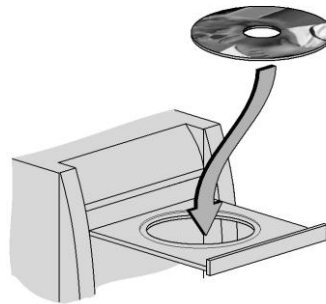
(P.C. illustration for guide only).

6.1. By running the setup program (icon below) the software will scan the PC's requirements and automatically install the required programs to run the Software.

6.2. Once setup is complete go to Start\All Programs\Integrity\Server Mode Switching Utility, select the desired communications method and restart service. When this has finished, close the window.
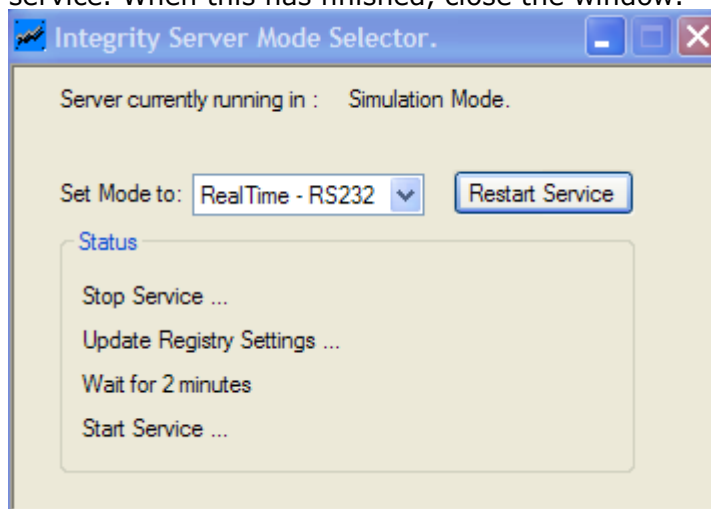
6.3. Go to Start\All Programs\Integrity\Integrity client and run the software.

7. ENVIRONMENTAL PROTECTION.

7.1. Maximum consideration has been given to environmental issues within the design and manufacturing process without compromising end product performance and value.

7.2. Packaging materials have been selected such that they may be sorted for recycling.

8. 'INTEGRITY' WINDOWS SERVICE.

In order for the 'INTEGRITY' to run, the 'INTEGRITY'-Service must be running on the target PC.
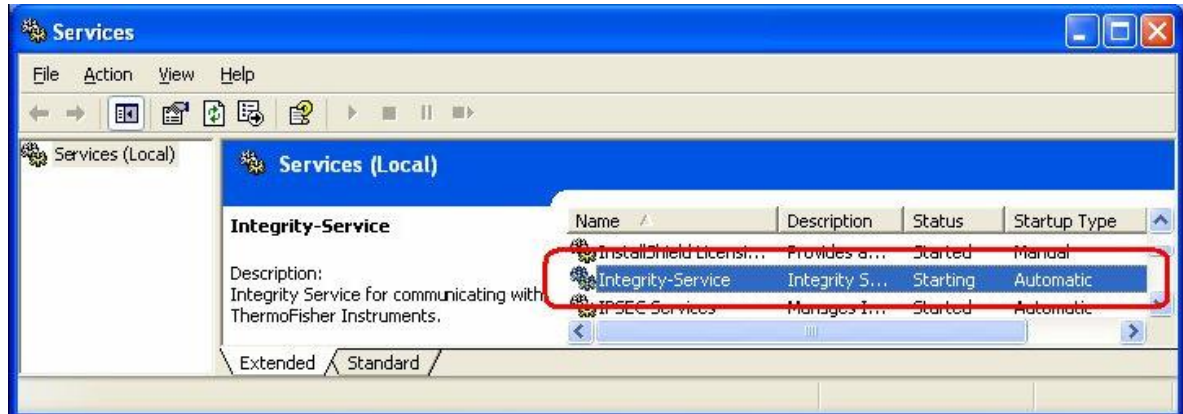
All communication to the attached devices are carried out by the 'INTEGRITY' Client through the 'INTEGRITY' Server.

9. 'INTEGRITY' HARDWARE KEY.

Please ensure that the Hardware Key (provided to you along with the 'INTEGRITY' software) is securely connected to your PC's USB Port before you start the 'INTEGRITY' UI.

10. 'INTEGRITY' CLIENT.

10.1.   The User Interface

10.1.1. The Main menu and Tool Bar

The 'INTEGRITY' Client has the standard tool bar as shown in the figure below.

Main Menu Item	Tool Item	Description
File >> exit	None	Close the 'INTEGRITY' Client. Note: the client will not close if there are running Experiments for this client.
View >> hardware	H	Displays the "Hardware" section in the main right pane. This option is disabled if the UI fails to connect to the server or is working in offline mode
View >> Experiment	E	Displays the "Experiments" section in the main right pane. This option is disabled if the UI fails to connect to the server or is working in offline mode
View >> Results	R	Display the "Results" section in the main right pane.
Tools >> User Management		Launches the "Change Password" pop-up screen for the currently logged in user.
Tools >> Change Password		Launches the "Change Password" pop-up screen for the currently logged in user
Tools >> Recipe Management		Launches the "management Recipe" pop-up screen.
Tools >> Manual Control		Launches the "RS Cell Info" screen if there is a connected Reaction Station.
Tools >> Lock		Locks the current UI instance.
Tools >> Abort All		Aborts all running Experiments, if any.
Tools >> Settings		Launches the Application Setting pop-up.
Help >> About RSPC-S	?	Displays the "About Dialog".

10.1.2. Status Bar.

The 'INTEGRITY' Client has the standard status bar as shown in the figure below.

| Ready | | COM1 | James | 10:20:06 AM |
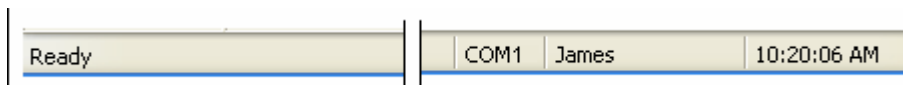
'INTEGRITY' User Guide.

Going from Left to Right, it displays the following information.

- Application Status.

- Active COM Port for the UI session.

- Current Logged in User ID.

- Current System Time.

10.1.3. Primary Navigation Buttons.

The following figure shows the primary navigation buttons of the 'INTEGRITY' application.

Primary Navigation Button	Description
Hardware	Displays the 'Hardware' section in the main right pane. The option is disabled if the UI fails to connect to the server or is working in offline mode.
Experiments	Displays the 'Experiments' selected in the main right pane. This option is disabled f the UI fails to connect to the server or is working in offline mode.
Results	Displays the 'Results' section in the main right pane.

10.1.4. Reaction Station Status Panel.

If a reaction status is connected to the target COM port, the 'INTEGRITY' Client displays a Reaction Station panel in the "Hardware" and "Experiments" screen which gives a quick snapshot of the status of each Reaction Station Cell. To accommodate more information into the status panel, each cell has two views. The first view primarily displays the Experiment status and Accessories available for that cell in an iconic form, while the second view displays the actual reading from the accessory probes. The Block Temperature and the Stirrer speed are displayed in both views.

◄RS10 Status Panel

The table below describes the various indicators used in the Status Panel Cell.

Field Name	Description
°C	Block Temperature.
RPM	Stirrer Speed.
Pr°C	Probe Temperature (2)
IR	IR Reading (2)
⬆	Indicates increase since last reading.
⬇	Indicates decrease since last reading.
🟩	Experiment loaded but not running (1)
▷	Experiment in Pre-Heat stage (1)
▶	Experiment is running temperature profiles (1)
⏸	Experiment paused (1)
🟧	Experiment Finished (1)
🌡	A Multi Temp unit is connected to the RS's AUX port, and its probe is assigned to the cell in 'Contents Control' mode. (1)
🌡	A Multi Temp unit is connected to the RS's AUX port or through Multiplexer, and its probe is assigned to the cell without 'Contents Control'.(1)
Heat Ex	Heat Exchange Temperature.

(1)   Items displayed in View 1 only.

(2)   Items displayed in View 2 only.

Note: NA (Not Available) is displayed if the application fails to read the specific reading.

10.1.5. Logged In.

To log into the 'INTEGRITY' Client, perform the following actions:

1. From the windows Start button, click on **Programs >> Electrothermal>> RSPC-S Client**.

2. To log into the application, enter a valid user name and password.
   User ID is "admin"
   Password is "rspc-s"

3. If recognised devices are connected to multiple COM Ports, then the COM ports will be listed in the 'COM Port' drop down. Select the COM port of your choice from the list, or select 'Work offline'.

   Note: If the server fails to detect any recognised device in any of the COM Ports, the COM Port list box will be disabled and automatically the 'Work Offline' mode will be selected.

10.1.6. Locking User Interface.

Lock feature allows the user to lock the user interface of the 'INTEGRITY' application. Once the user interface is locked, no other operations are allowed unless the user unlocks it. User interface is unlocked using the user's login password.

To Lock the User Interface.

1. From the Main menu, select the **'Tools >> Lock'** option.

    Or

    Click on the 🔒 icon on the Tool Bar.

2. The '**UI Lock'** window appears.

3. User interface is locked. Enter the password and click **'Unlock'** to unlock the user interface.

11. MANAGING USERS.

In this section the user is permitted to add and manage other users. The main features of this module are:

- Addition of |New users to the 'INTEGRITY' application.

- Deletion of existing users from the 'INTEGRITY' application.

- Managing access rights of users.

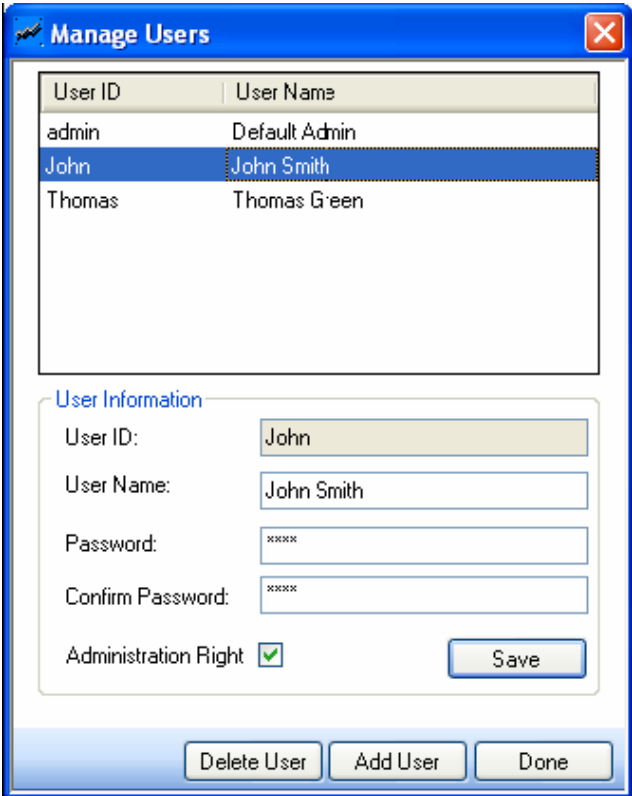### 11.1. Add, Modify or Delete users.

To add a new User.

1. From the main Menu, select the **'Tools >> User Management'** option.

Or

Click on the icon in the Tool Bar.

2. The **'Manage User'** window appears.

The top half of this screen displays the list of existing Users. The details of the selected user can be viewed or edited in the User Information section in the lower half of the screen.

The following table gives the details of the attributes on the Manage Users screen.

Field Name	*Description*
User ID	User has to input User ID in this field.
User name	Displays the User name of the selected user. This field is editable.
Password	Displays the Password of he selected user. This field is editable.
Confirm Password.	Displays the password of the selected user. This field is editable.
Administration Rights	Select 'Administration Rights' option to give administration privileges to the user.
Save	Saves the user details created from the application.
Delete User.	Deletes the selected user from the application.
Add User.	Adds a new user to the application.
Done.	Click this to close the 'User Manager'.

3. To add a 'new user', click **Add User** and enter the following details in the User Information section.

- User ID

- User Name

- Password

- Confirm Password

- Administration Right.

4. Click **'Save'** to store the new user information into the 'INTEGRITY' application.

To modify an existing User.

1. Select the user you wish to modify from the User List. This will display the user's details in the User Information section.

2. Modify the following details in the User Information section:

- User Name

- Password

- Confirm Password.

3.   Click **'Save'** to store the modified user information.

   Note: Users with an administration right can add, delete and modify the attributes of another user. If the administration rights are not given to the user the user can only change the password. Select the Administration rights option if you want to give administration privileges to the user.

   To Delete an Existing User.

1.   Select the 'User' you wish to delete from the User List.

2.   Click 'Delete User' in the Manager window. The following warning will be displayed.

3.   Click 'Yes' to delete the user permanently from the 'INTEGRITY' application.

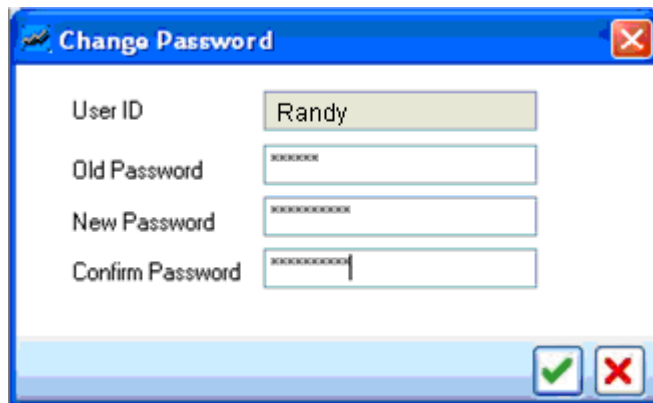**11.2.   Change Password of Current User.**

   To Change the Password of the Current User.

1.   From the main menu, select the Tools >> Change Password option.

   Or

   Click the 🔑 icon in the Tool Bar.

2.   The Change Password window appears which displays the User ID of the logged in user.

3.   Type the Old Password in the 'Old Password' Field.

4. Type the New Password in the 'New Password' field and confirm the new password in the 'Confirm Password field'.

5. Click for accepting the change in the Password.

12. RECIPE MANAGEMENT.

Recipe Management allows the user to add new recipes and delete or modify existing recipes. Recipe details of various samples used for running experiments can be pre-defined using this screen, and can be used to link them during defining Experiments.

12.1.   **Add, Modify or Delete a Recipe.**

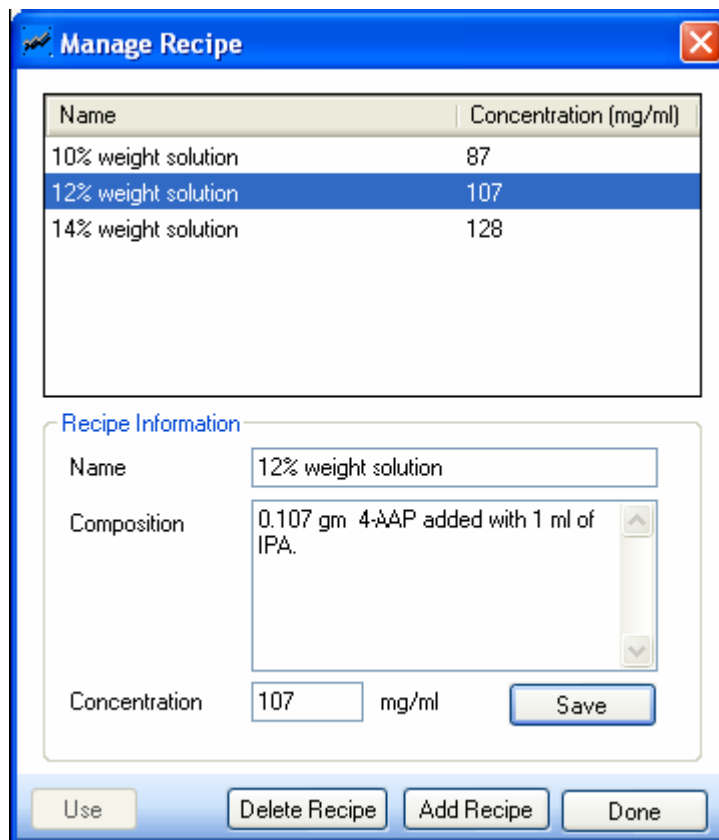   ***To add a new Recipe.***

1.   From the Main menu, select the **Tools >> Recipe Management** option.

         Or

         Click the   icon in the Tool Bar.

2.   The **Manage Recipe** window appears.

The top half of this screen displays the list of existing Recipes. The details of the selected recipe can be viewed and edited in the Recipe Information section in the lower half of the screen.

The attributes in the Manage Recipe screen are explained in the below table.

Field Name	Description
Name	Displays the recipe name.
Composition	Displays recipe composition. Enter any free format textual display of the composition in this field.
Concentration (mg/ml)	Displays the concentration of the recipe used.
Save	Saves the changes done.
Used	Enabled only when this is invoked from the Experiment wizard screen.
Delete Recipe	Deletes the selected recipe.
Add recipe	Clears the recipe information of the previously selected recipe and allows the user to add new recipes.
Done	Closes the Manage screen.

3.   Click '**Add Recipe'** and enter the following details:

- Name

- Composition

- Concentration.

4.   Click Save to store the new recipe information into the 'INTEGRITY' application.

To Modify an Existing Recipe.

1.   Select an existing recipe from the Recipe List. Its details will be displayed in the recipe Information section.

2.   Modify the following details in the Recipe Information section:

- Name.

- Composition.

- Concentration.

3.   Click save, to store the modified recipe information.

4.   To delete existing users, click delete User in the manage Recipe window and the following warning is displayed.

5.   Click **'Yes'** to delete the recipe permanently from the 'INTEGRITY' application.

13. HARDWARE

13.1.   Hardware View.

The hardware module is one of the main components of the 'INTEGRITY' application. In this section the RSCS application displays the hardware detected in the target COM Port. The main objectives of the module are:
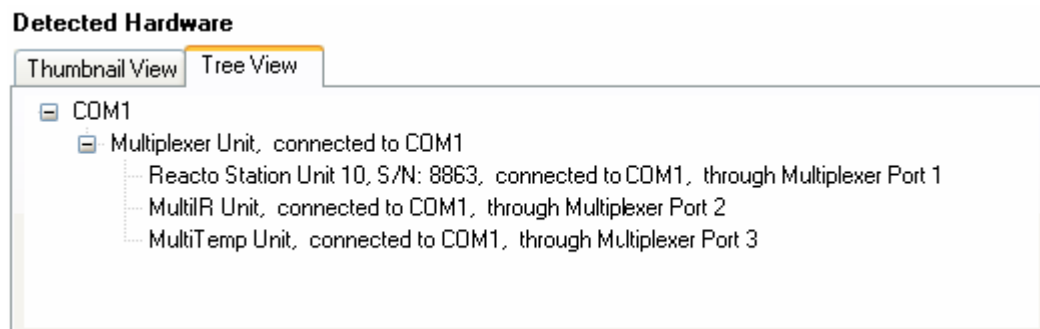
- To detect if hardware components are connected to the PC when the RSPC application is running.

- To display the different views of the hardware components.

- To monitor the attributes of individual hardware components.

- To control individual hardware components.

By   clicking on the following tab's the detected hardware can be viewed in one of two ways:

- **Thumbnail View:** This view displays thumbnail images of the detected hardware components.

- Tree View: The tree view displays a tree of the detected components, as shown in the following figure.

Note: Both the icon view and the tree view gives a list of all the hardware components connected to the active port of the 'INTEGRITY' UI session.

13.2. Instrument Information Screens.

Each Instrument Information Screen will provide all the information on the hardware components currently connected to the 'INTEGRITY' application system. Users can select hardware components individually and view their details.

13.2.1. Multiplexer Information.
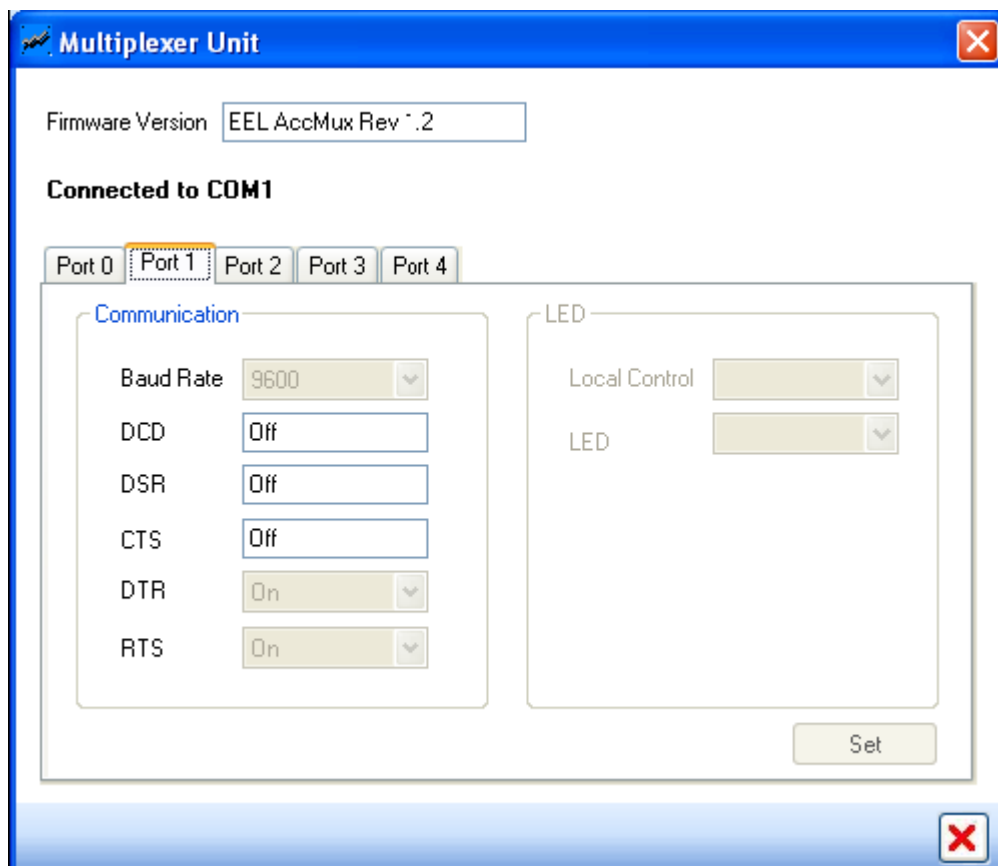
To view Multiplexer Information.

1. In the detect hardware's Thumbnail view, double-click **Multiplexer Unit Thumbnail**.

   Or

   In the detect hardware's Tree view, double–click **Multiplexer Unit node**.

2. The **Multiplexer Unit** window appears.

The table given below explains the various attributes of the Multiplexer Unit Screen.

Field Name	Description
Firmware Version	Indicates the current firmware version.
Port 0-port 4	Indicates the availability communication ports.
Communication	Allows the user to specify the communication attributes.
Baud rate	Indicates the Baud Rate of the selected COM port.
DCD	User can select the status of the switch.
DSR	User can select the status of the switch.
CTS	User can select the status of the switch.
DTR	User can select the status of the switch.
RTS	User can select the status of the switch.
LED	< Not available in the current version or 'INTEGRITY' >
Local control	< Not available in the current version of 'INTEGRITY' >
Set	< Not available in the current version of 'INTEGRITY' >

13.2.2. Reaction Station Information.

To view Reaction Station Information.

In the Detect hardware's Thumbnail View, double-click Reaction Station.

Or

In the Detect hardware's tree view, double click Reaction Station node.
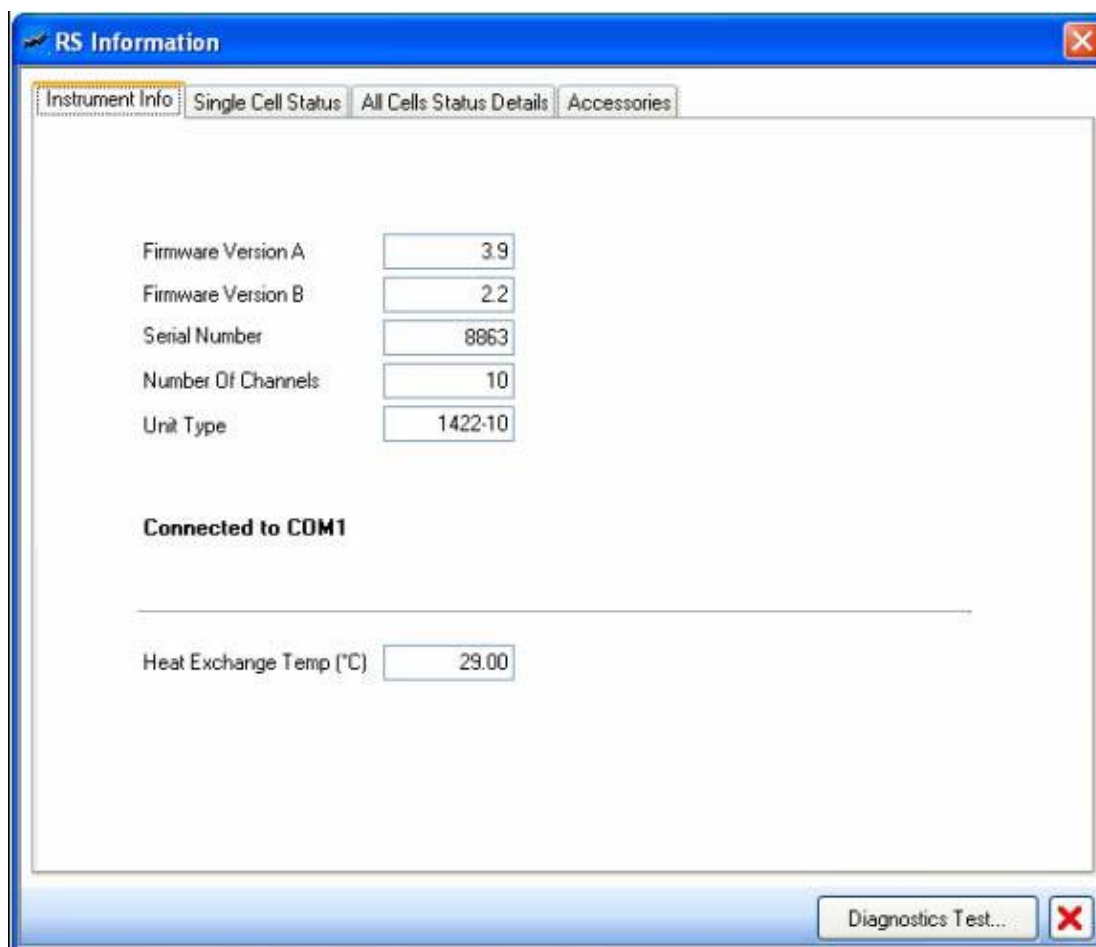
General Instrument information.

This section gives the details of the selected reaction Station. The details for the Reaction Station can be broadly classified into four categories:

- Instrument Information.
- Single Cell Status.
- All Cells Status details.
- Accessories.

The following figure gives the details of all the general Instrumentation Information for the selected Reaction Station.

Instrument information.

The following table gives details of the I**nstrument information screen.**

Field name	Description.
Firmware version A	Indicates current firmware version A
Firmware version B	Indicates current firmware version B
Serial Number	Indicates serial number of the Reaction Station.
Number of Channels	Indicates the number of channels the Reaction Station has.
Unit type	Indicates the unit type in use.
Heat exchanger Temp	Indicates the current temperature of the Reaction Station Heat Exchanger.

Single Cell Status

The following figure shows the details of **Single Cell Status** tab.

The following table gives details of the **Single Cell Status screen**.

Field name	Description
Cell #	Indicates selected cell number for which the information is being displayed
This cell is currently being used by	Displays the name of the user, if any, who may be running an Experiment in this cell.
Temperature	Displays the various Temperature related information.
Control Enabled Toggle ☐ All	If control enable is selected, then the Thermal Control of that particular cell is enabled. If the "All" check-box is selected, it will enable the Temperature Control for all the cells.
Ramp Rt (°c/min) Set ☐ All	Allows user to set the Temperature Ramp Rate. If the "All" check -box is selected; Temperature Ramp Rate is set for all the cells.
Set Point (°c/min) Set ☐ All	Allows user to change Temperature Set Point. If the "All" check-box is selected, Temperature Set Point is set for all the cells.
Actual (°c)	Indicates actual temperature.

|	
Limit (°c) [Set] ☐ All	Allows user to set Temperature Limit value. If the "All" check box is selected, Temperature Limit is set for All cells.
Stirrer	Displays the various Stirrer related information.
Control Enabled. [Toggle] ☐ All	If Control Enabled is selected, then the Stirrer Control is enabled for that particular cell. If the "All" check-box is selected, it will enable that the Stirrer Control is enabled for all the cells.
Flee Loss Detect [Toggle] ☐ All	Allows the user to enable Flea Loss Detection. If all check boxes are selected, Detect Flea Loss attribute is set for All cells. **Note:** The Flea Loss Detection feature is depreciated from this version of 'INTEGRITY'.
Ramp Rt (RPM) [Set] ☐ All	Allows the user to change the Stirring speed ramp rate. If all the check-boxes are selected the stir speed ramp rate is set point is set for all the cell positions.
Set Point (RPM) [Set] ☐ All	Allows the user to change the Stirring speed set point. If all the check-boxes are selected the stir speed is set for all the cell positions.
Actual (RPM)	Displays the viscosity of the sample.
All Cell Summary	This tubular view displays important details of all the cells of the Reaction Station.

All Cell Status Details:

The following figure provides all the cell details for the selected Reaction Station.

Cell #	1	2	3	4	5	6	7	8	9	10
Thermal Ctrl	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temp Min	-30.00	-30.00	-30.00	-30.00	-30.00	-30.00	-30.00	-30.00	-30.00	-30.00
Temp Max	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00
Temp Limit	165.00	165.00	165.00	165.00	165.00	165.00	165.00	165.00	165.00	165.00
Temp R/Rate	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Temp SetPoint	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Temp Actual	6.53	6.53	6.55	6.30	6.33	6.35	6.35	6.38	6.40	6.40
Ctrl Cont	None	None	None	None	None	None	None	None	None	None
Ext Temp Ch...	None	None	None	None	None	None	None	None	None	None
Temp External	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stirrer Enabled	No	No	No	No	No	No	No	No	No	No
Flea Loss	No	No	No	No	No	No	No	No	No	No
Stirrer Min	0	0	0	0	0	0	0	0	0	0
Stirrer Max	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Stirrer SetPoint	0	0	0	0	0	0	0	0	0	0
Stirrer Actual	0	0	0	0	0	0	0	0	0	0
Viscosity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IR Channel	None	None	None	None	None	None	None	None	None	None

Accessory Setup

The following figure shows the details of the **Accessory Setup** tab.
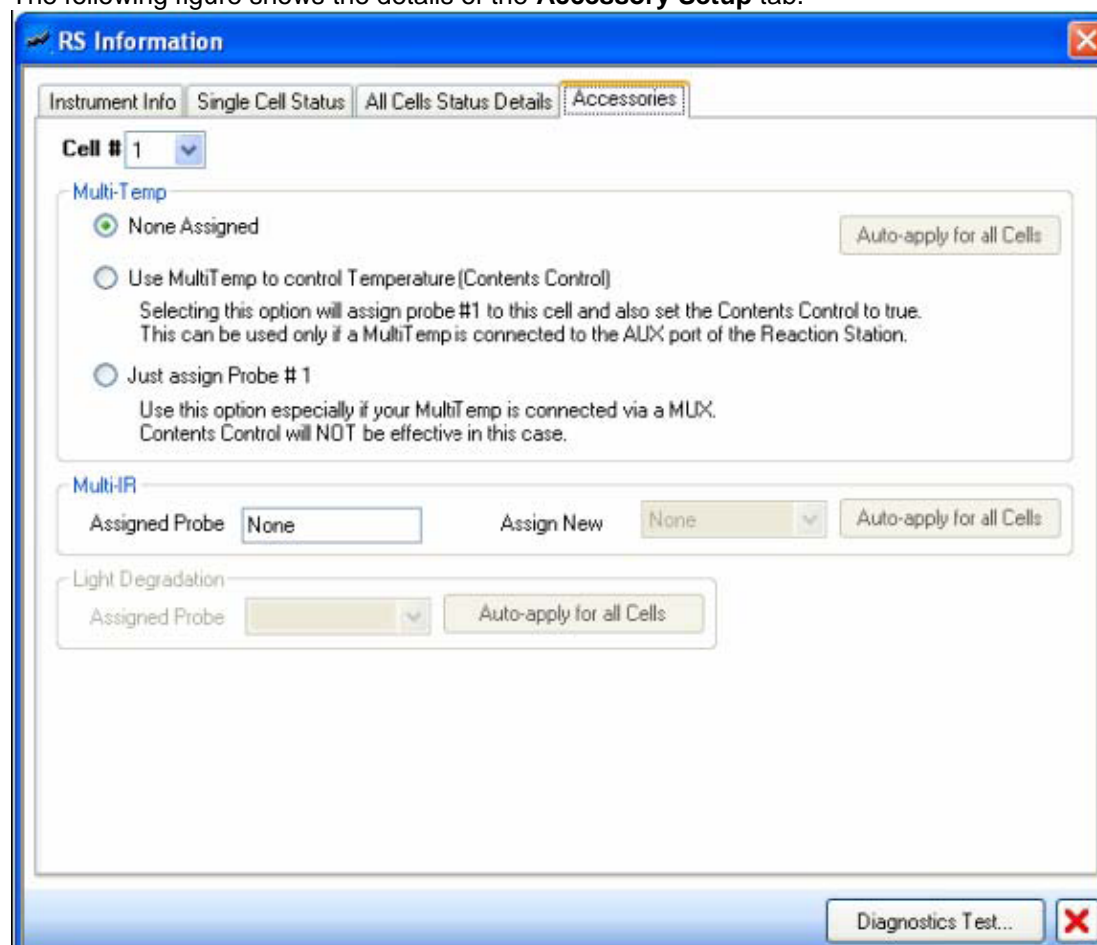
The following table gives details of the Accessories tab

Field name	Description.
Cell #	Indicates the selected cell number for which the information is detected.
Multi Temp	Group where the Multi Temp related controls are displayed.
None Assigned	Default setting, when Multi Temp unit is not connected to the 'INTEGRITY' application.
Use Multi Temp to control Temperature (Contents Control).	User can select this option to set the Contents Control to true. This option can be used only if a Multi Temp is connected to the AUX port of the Reaction Station (RS10).
Just Assign Probe # <n>	User can use this option to assign a Multi Temp probe to the cells. Contents Control will NOT be effective in this case. This is applicable if the Multi Temp is attached either via a MUX or the RS AUX port.
Auto-apply for all Cells	Automatically assigns Multi Temp probes 1,2,3 … to RS cells 1,2,3 …
Multi IR	Group where the Multi IR related controls are displayed.

Assign probe	Displays the already assigned Multi R Probe.

Multi IR	Group where the Multi IR related controls are displayed.
Assigned Probe	Displays the already assigned Multi IR probe.
Assign New	Use this dropdown to assign a new Multi IR Probe to the cell
Auto-apply for all Cells	Automatically assign Multi IR probes 1,2,3 … to RS cells 1,2,3 …

Diagnostics Test

Diagnostics Test allows the user to conduct automated diagnostics on the respective Reaction Station.

To conduct Diagnostics Test.

1. Right-click on any of the cells in the Experiment screen to display a pop-up menu.

2. From the pop-up menu, click on **View Status.** The RS Information window will appear.

3. From the RS Information window, click **Diagnostics Test** button to display the RS Diagnostics screen.
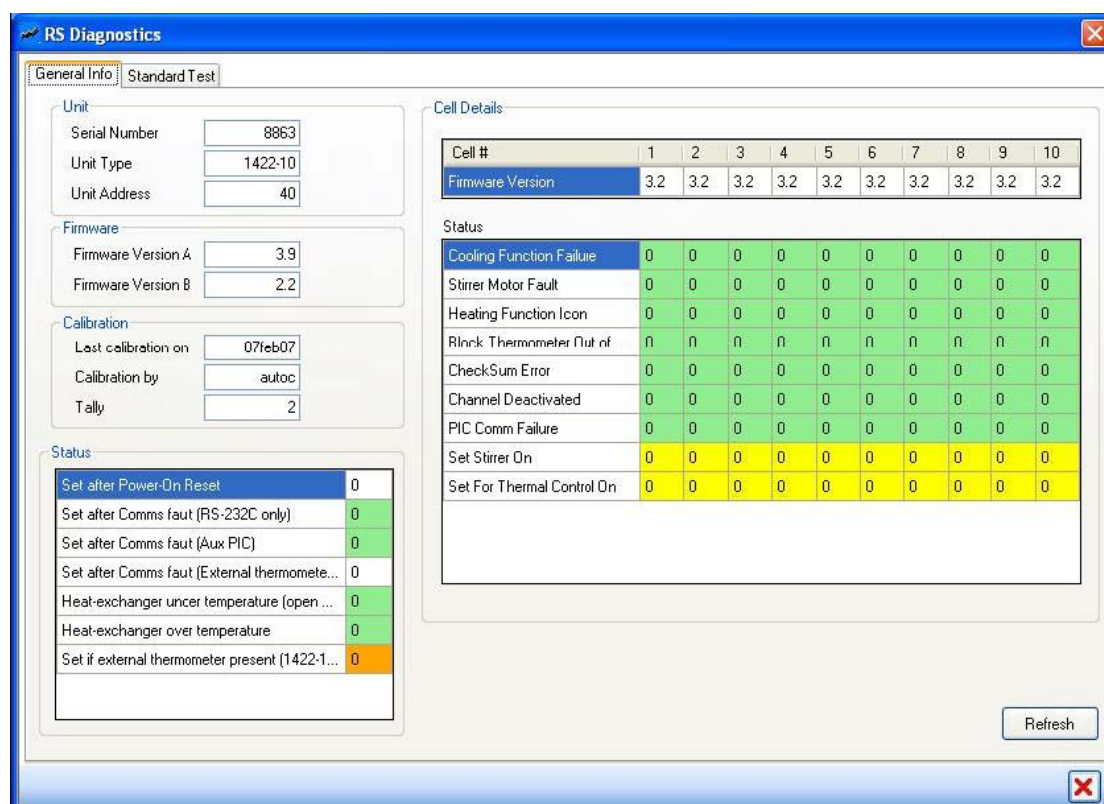
The following table gives the description of the fields under the General Info tab in the RS Diagnostic screen:

Field name	Description.
Unit	Indicates the type of Reaction Station.
Serial Number	Indicates the serial number of the Reaction Station.
Unit Type	Indicates the type of RS unit being employed.
Unit Address	Indicates the Base Address of the reaction Station.
Firmware version A	Displays Firmware A.
Firmware version B	Displays Firmware B.
Calibration	Displays calibration details for the Reaction Station.
Last Calibration on	Displays last calibration date.
Calibration by	Display the tally information.
Status	Displays the various status of the reaction Station.
Cell Details	Displays the cell number of the Reaction Station.
Cell #	Displays the cell number of the hardware component.
Firmware version.	Displays the firmware version of each cell.
Status	Displays status of each cell.
Refresh	Refreshes the display data.

4.   Click on the **Standard Test** tab. This will display the following screen.
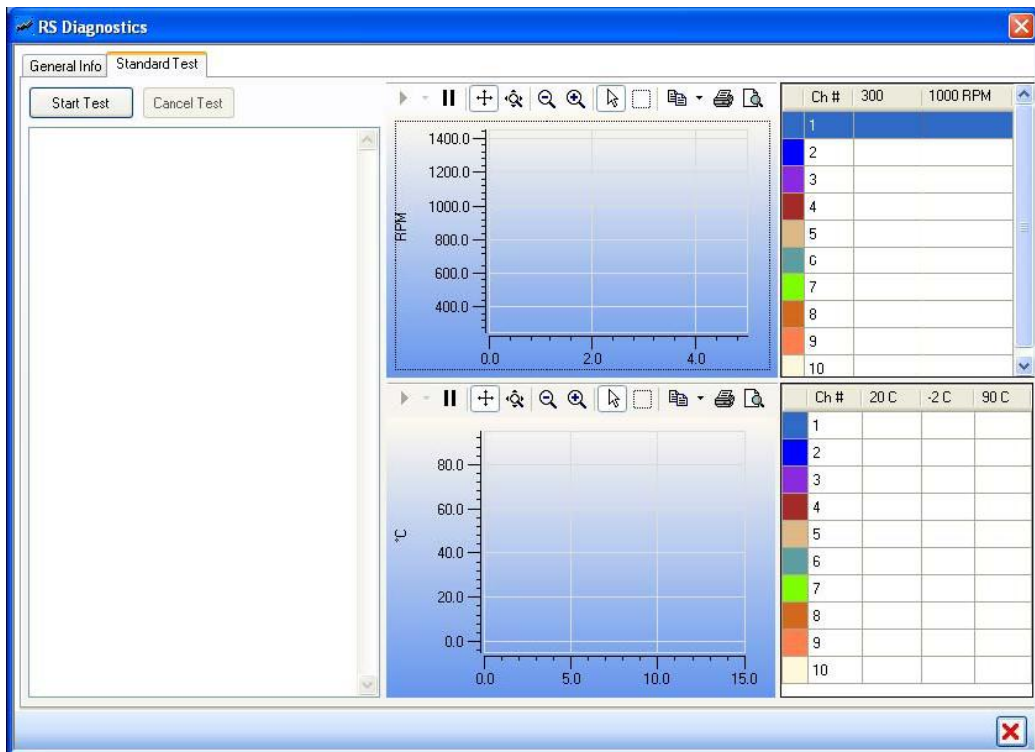
5.   Click on the **Start Test** button to start the diagnostic tests.

6.   The system will first perform the Stirrer Tests (only for RS10) followed by the temperature tests. The results will be displayed in the graphical and tabular view.

7.   To cancel the test, click **Cancel Test**.

8.   Click OK to cancel the test.
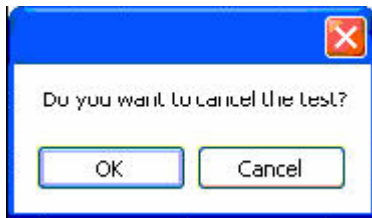
13.2.3. Multi Temp Information.

To View Multi Temp Information.

1.   In the Detected Hardware's Thumbnail View, double-click Multi Temp Unit.

         Or

         In the Detect Hardware's Tree view, double-click Multi Temp unit node.

2.   **Multi Temp Unit** windows appears.
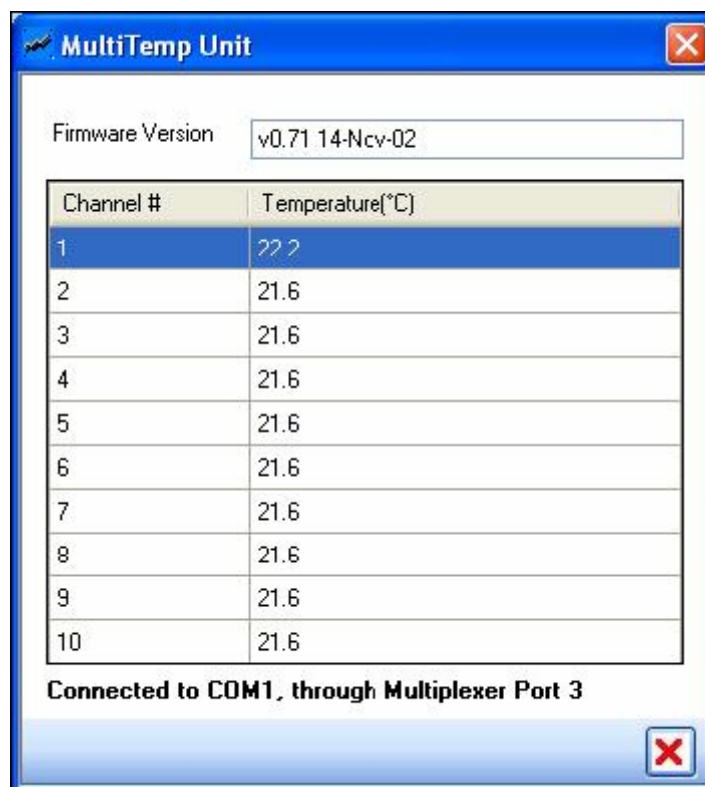
Note: Multi Temp Unit displays its connection status, in the lower part of the screen.

The following table gives the details of the Multi Temp unit.

Field name	Description.
Firmware version	Displays current firmware version.
Channel #	Displays Channel number.
Temperature (°c)	Displays current Temperature reading for the selected channel.

13.2.4. Multi IR Information.

To view Multi IR Information.

1. In Detect Hardware's Thumbnail view, double-click Multi IR Unit.

   Or

   In detect Hardware's Tree View, double-click Multi IR node.

2. **Multi IR Unit** window appears.
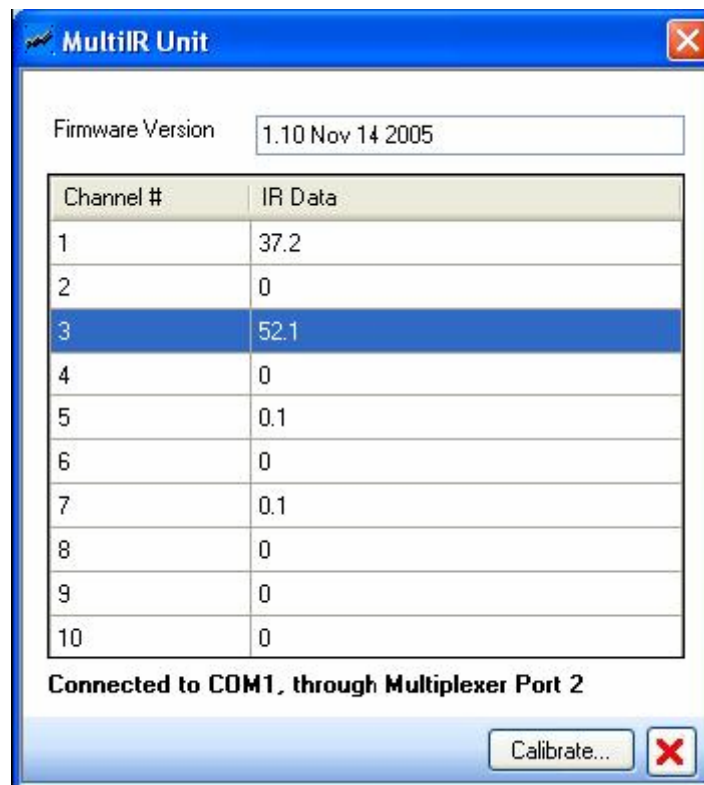
Note: Multi IR unit displays its connection status, in the lower part of the screen.

The following table gives details of the Multi IR unit.

Field Name	Description.
Firmware version	Displays current firmware version.
Channel #	Displays Channel number.
IR Data	Displays the current IR reading for the channel.
Calibration Button	Launch the Calibration Multi IR screen.

To Calibrate Multi IR.

13.2.5. In Multi IR Unit screen, click the calibration button

    Or

    Click the Tools >> calibrate Multi IR main menu option.

13.2.6. Multi IR calibration window appears.
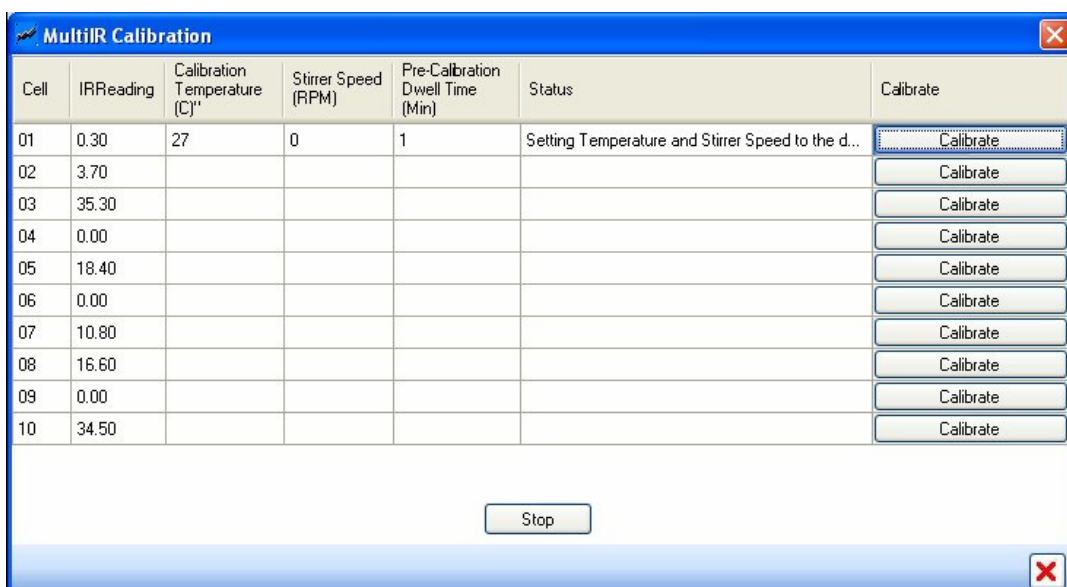
13.2.7. Type in the Calibration temperature, Stirrer Speed and Pre-Calibration Dwell time against the Channel that needs to be calibrated and click the corresponding Calibration button.

13.2.8. After temperature and Stirrer speed have been stabilised, the system prompts the user to load a clear sample.

13.2.9. Press OK on the message box after the clear sample is physically loaded by the user. The system them proceeds to calibrate the upper limit.

13.2.10. Once the upper limit is set, the system waits for two minutes and prompts the user to load a turbid sample.

13.2.11. Press OK on the message box after the turbid sample is physically loaded by the user. The system them proceeds to calibrate the lower limit.

13.2.12.   Once the Calibration has been successfully completed, the status is displayed to the user.

13.2.13.   At any point of time, the Calibration can be stopped by pressing the Stop button.

13.3.   Monitoring and Recording real Time Data from Hardware.

This section allows the user to monitor and record the real time data from the connected Reaction Station or any other accessories.

The following figure shows the **Real Time Data plotter screen**.
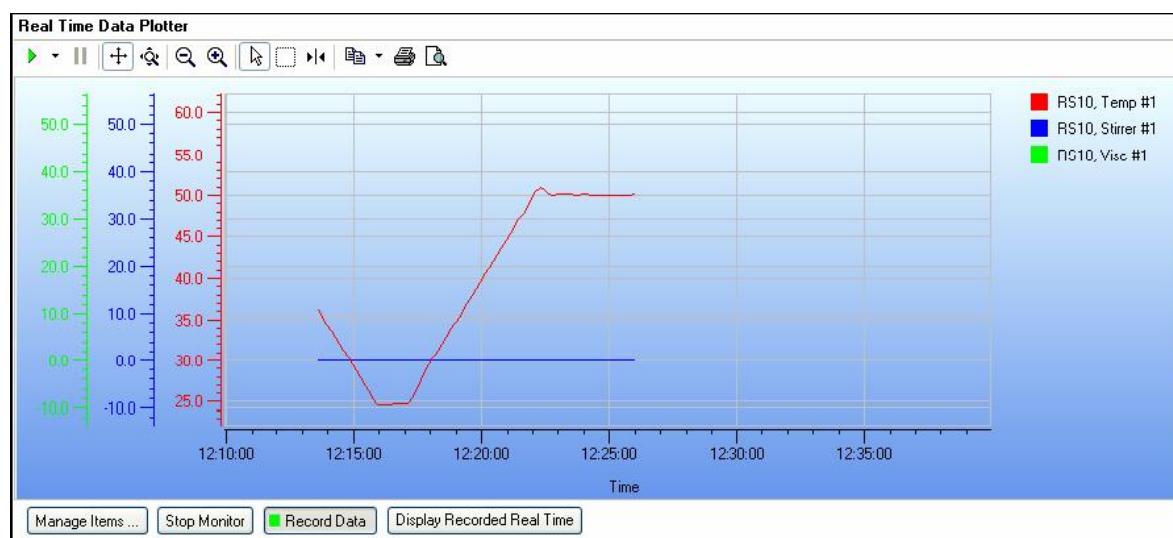
Channels can be added for monitoring by using the Manage Item**….** Button. Use this to modify or delete channels as well.

Click on the **Start Monitor** button to commence monitoring the channel. This reads the channel data from the device and plots them on the graph. It does not save any data into the database.

To save monitored channel data, click on the **Record Data** button. The *lit-up* green Icon on the button indicates that data is being recorded.

13.3.1. Adding Channels for Monitoring.

To Add Channels for Monitoring.

1.   On Real Time data Plotter screen, click **Manage Items…** button.

2.   Manage Items window appears.
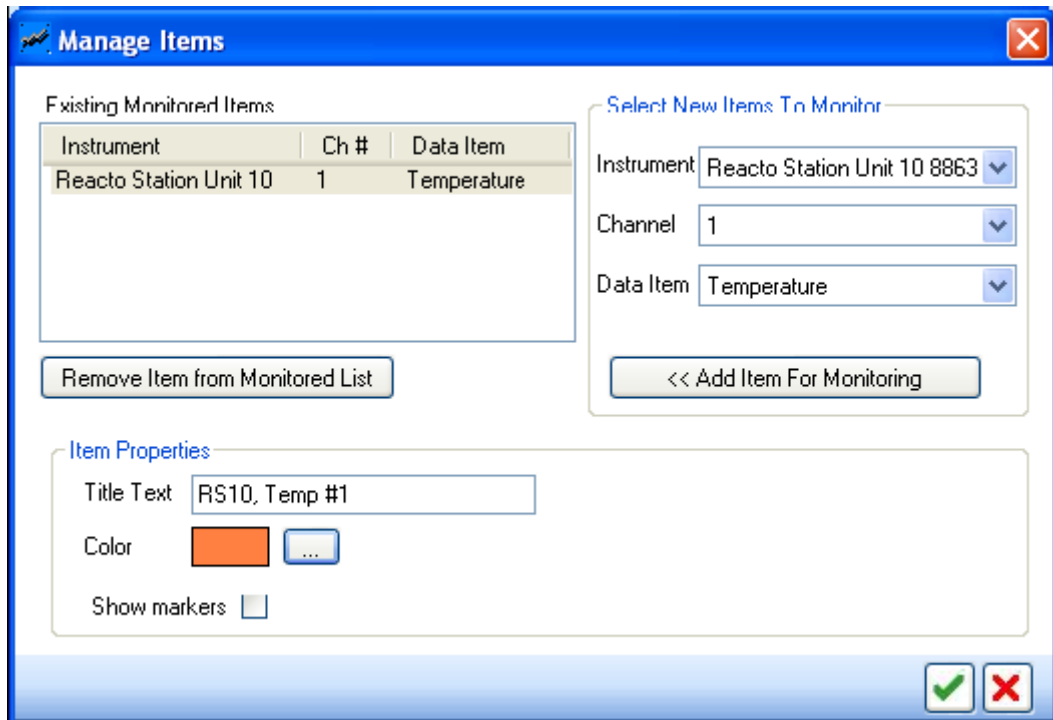
The following table will give details about the attributes in the Manage Items window.

Field Name	Description
Existing Monitored Items	List of channels from the detached hardware, which are already selected for monitoring are displayed here.
Remove Item from Monitored List	Clicking this removes the selected item from the 'existing Monitored Item' list.
Select New Items to Monitor.	Allows the user to select new hardware item, its channel and supported Data Item for monitoring.
<< Add Item For Monitoring	User can add hardware components to the existing monitored list.
Item Properties	This group displays the graph properties for the selected item in the 'Existing Monitored List' the user can change the properties if required.

Title text	Title of the Graph Channel.
Colour	Graph Channel Colour.
Show markers	Whether to mark data points on the channel or not.

13.3.2. Viewing Pre Recorded Data.

To view Pre Recorded Data

1. On Real Time Data Plotter screen, click Display Record Real Time.

2. Display, **Pre-Recorded Data** screen is displayed.

3. Select the node that you require to view and display the corresponding data in the graph on the right.

4. Right click the mouse on the corresponding tree node and choose the 'Delete' context menu you will delete previously recorded data.
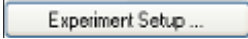
14. DEFINING AND LOADING EXPERIMENT.

This feature allows the user to:

- Setup Experiment definitions using an easy to use wizard.

- Save Experiment definitions as named templates.

- Load Experiment definitions to cells from pre-defined named templates.

- Edit Experiment definitions.

14.1.   Experiment setup.

To View Experiment Set-up.

1. Click on the Experiment Setup Tab [Experiment Setup ...] on the 'INTEGRITY' screen.

   Or

   Right click on an inactive cell in the Reaction Station panel and select **New Experiment Setup** from the op-up menu.
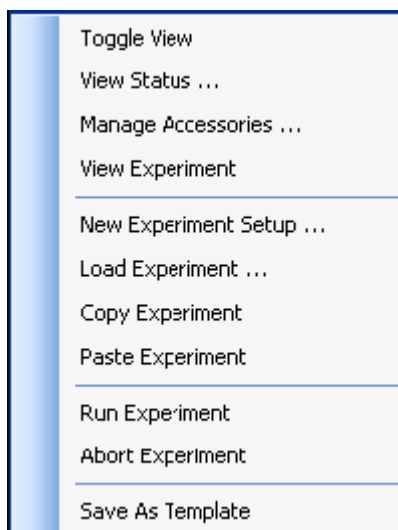
2. Experiment Setup window appears.
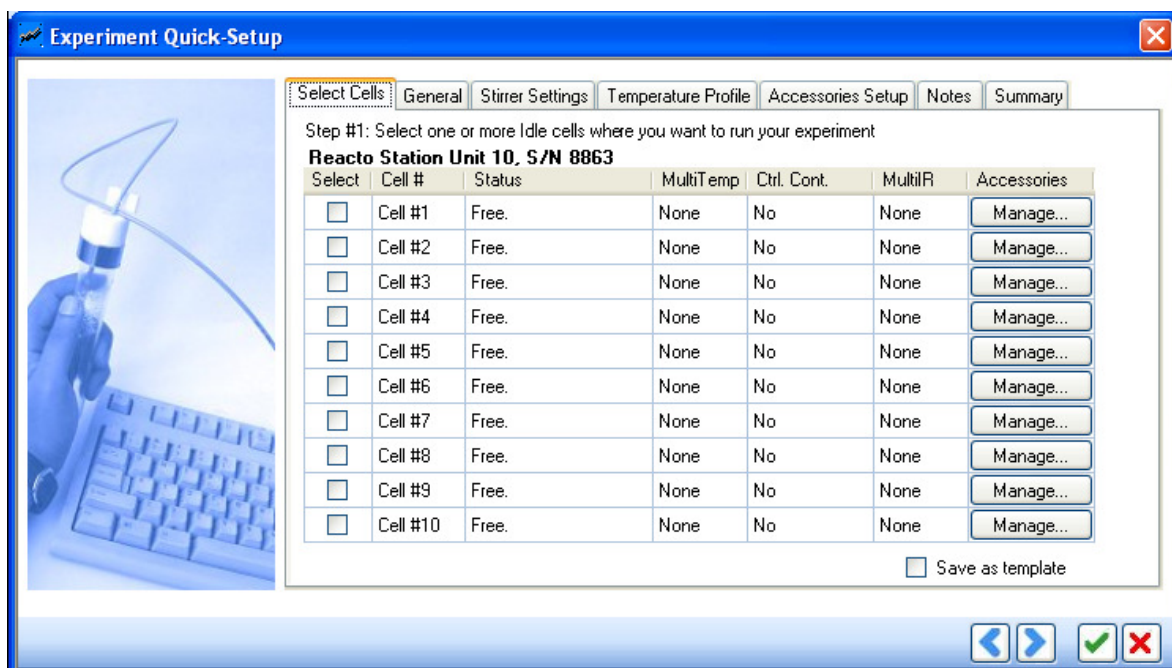
3. The Tabs on the Experiment Quick Setup window are:

- Select Cells

- General

- Stirrer Settings

- Temperature Profile

- Accessories Setup

- Notes

- Summary

4. Click Select Cells tab to select one or more cells where the user wants to run the experiment.
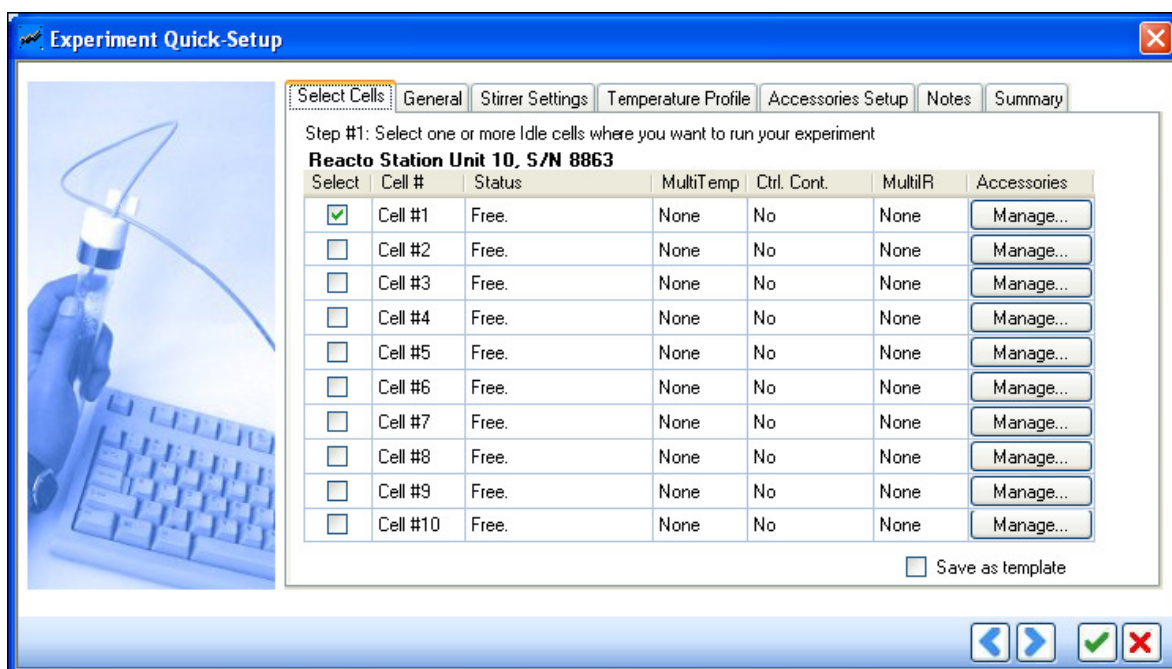
The following table explains the various fields that are displayed under the select Cells tab.

Field name	Description
Select	Click the Select Check box to choose cells for the experiment.
Cell #	Indicates the cell number of the Reaction Station.
Status	Indicates whether the cell is free or whether it is being used by other users.
Multi Temp	Indicates which probe of the Multi Temp (if present) is assigned to this cell.
Ctrl. Cont	Indicates if the Control Content is enabled for this cell.
Multi IR	Indicates which probe of the 'Multi IR (if attached) is assigned to this cell.
Manage Button.	Click this button to launch the 'manage Accessories' tab of the RS 'Information' screen.
Save as Template	Select Save as Template check box to save the experiment settings as a Template.

5. Click **General** tab to enter the general information for the experiment.
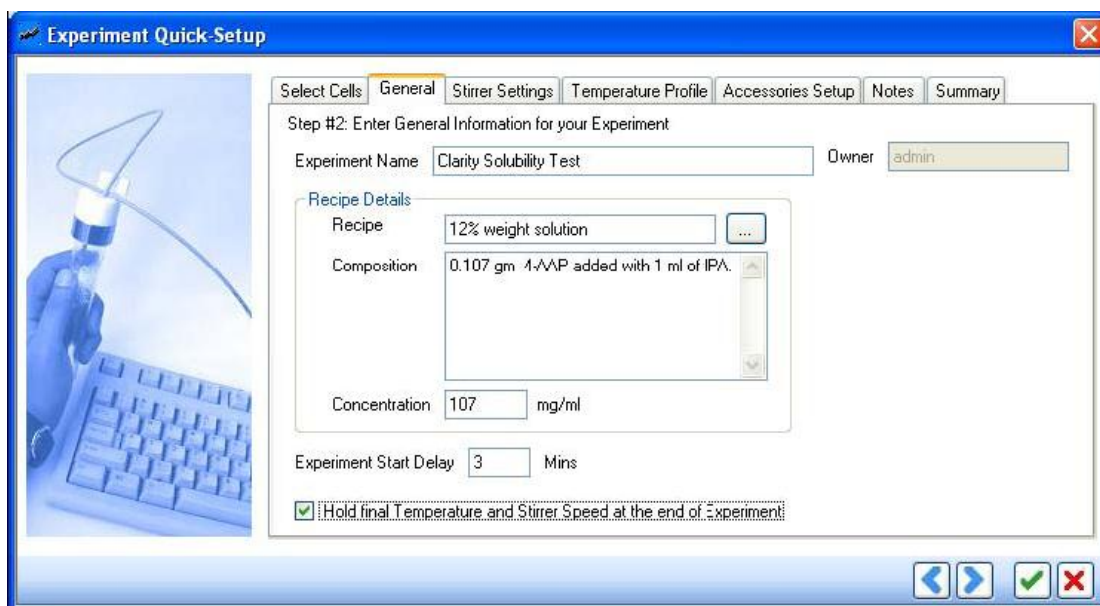
The following table explains the various fields that must be filled in under the **General tab.**

Field Name	Description
Experiment Name	A unique name for the Experiment.
Owner	The logged in user ID is displayed here. This value is read-only.
Recipe	Recipe name
Composition	Indicates the selected recipe composition.
Concentration mg/ml	User can view the concentration of the selected recipe.
Experiment Start Delay (in minutes).	Define time delay for starting the experiment.
Hold final Temperature and Stirrer Speed at the end of the Experiment.	If the is selected the final Temperature and Stirrer Speed will remain unchanged at the end of the experiment.

6. Click Stirrer **Settings tab** to specify the stirrer settings for the experiment.
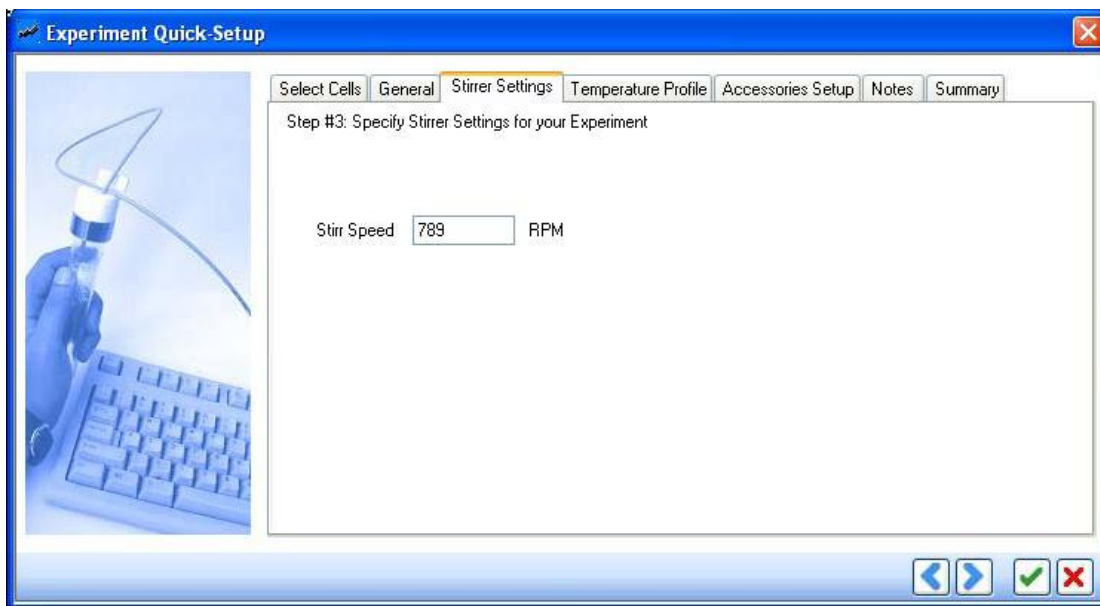
The following table explains the field displayed under the Stirrer Settings tab.

Field Name	Description.
Stirrer Speed (RPM)	Set Experiment Stir Speed

7. Click on the Temperature profile tab to specify the experiment default temperature and stirrer profile.
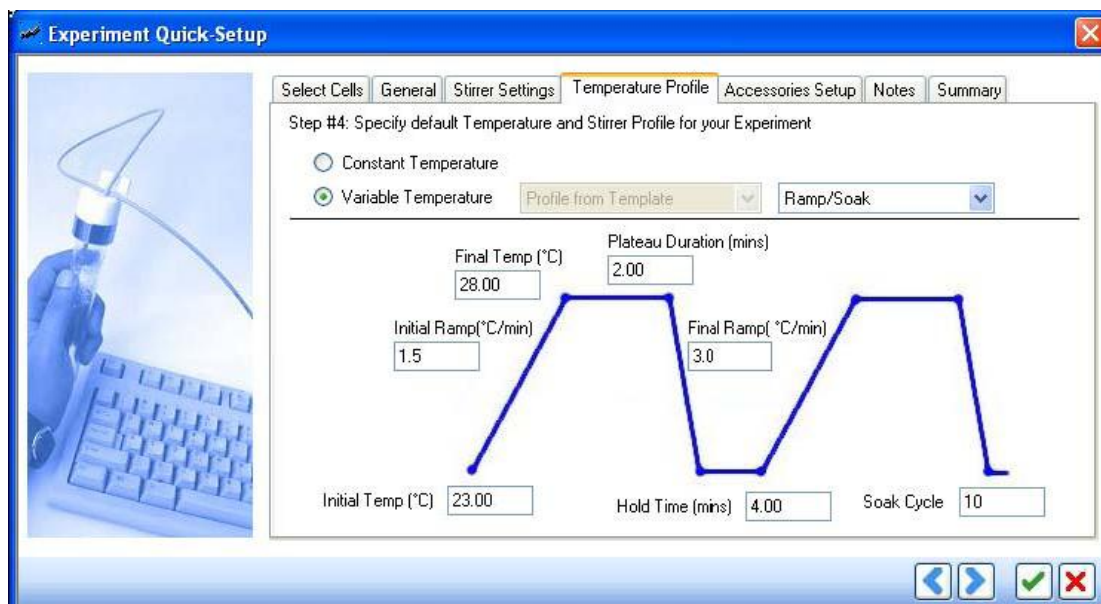
The following table explains the various fields displayed under the Temperature profile tab.

Constant temperature	Description
Constant Temperature	Select this option to setup a constant temperature Experiment.
Variable Temperature	Select this option to setup a variable temperature Experiment. User can select the required option from the variable temperature list box. The lower panel will change accordingly where the user can enter Temperature Profile data.

8. Click on the **Accessories Setup** tab to specify the Experiment Accessories Preferences.
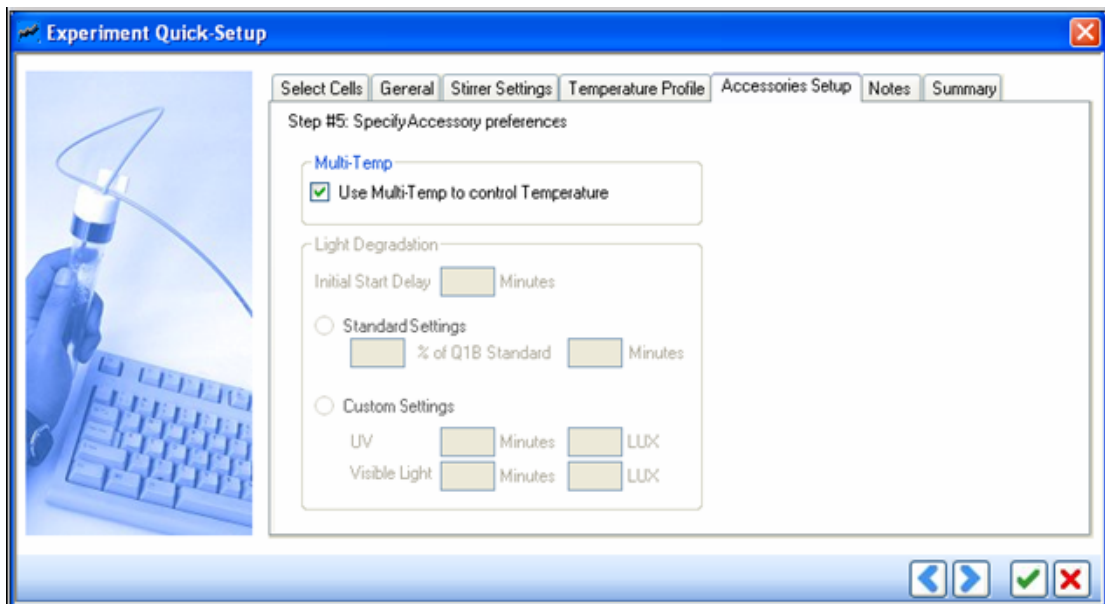
The following table explains the various fields displayed under the Accessories Setup tab.

Field Name	Description
Use Multi-Temp to control temperature	Use the Multi Temp to control temperature check box to control the cells for the selected experiment.
Light Degradation	< Not available in this version of 'INTEGRITY' >

9. To add experiment notes, click on the **Notes Tab**.
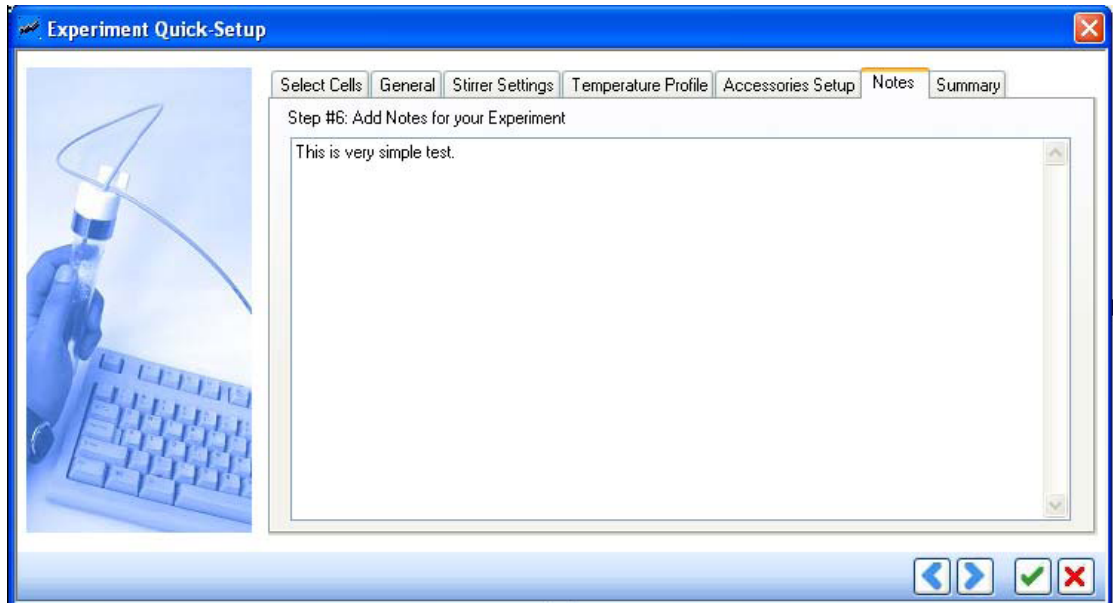
10. To view the experiment summary, click on the Summary tab. It gives a brief description of the entire experiment as setup in the previous tabs.
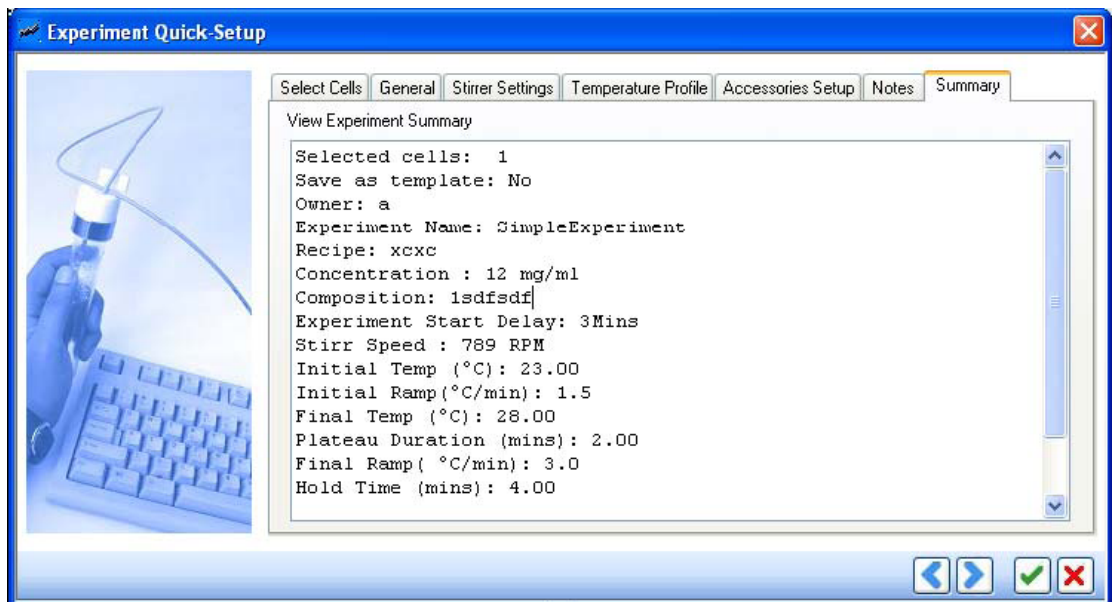
11. Click on the ✔ button to commit the changes in the Experiment. This will load the Experiment in the selected cells and save the Experiment Table (if selected) into the database.
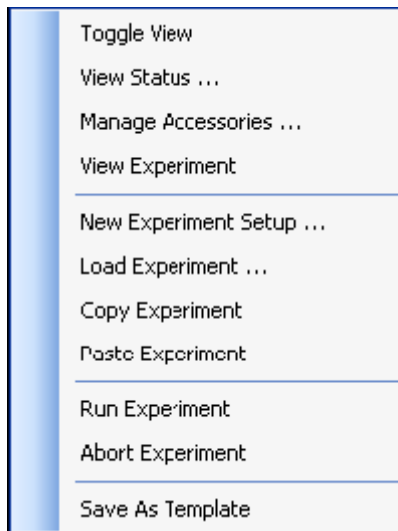
14.2.   Loading an Experiment.

This function allows the user to load pre-defined Experiments stored in the 'INTEGRITY' application.

To Load the Experiment.

1.   Click the **Load Experiment** [Load Experiment ...] tab on the 'INTEGRITY' screen.

     Or

     Right click on an empty cell and select **Load Experiment** from the pop-up menu.

2.   The load Experiment from Template window will now appear.
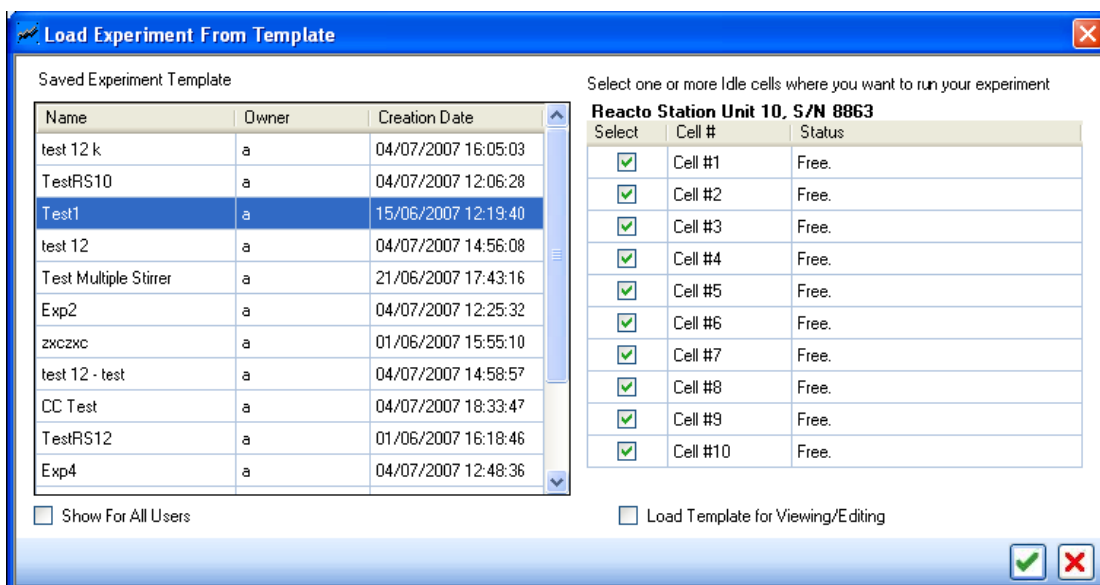
The following table details the Load Experiment feature.

Field Name.	Description.
Saved Experiment Template list	List of pre-defined Experiment Templates.
Name	Displays the Experiment Template name.
Owner	Displays the ID of the user who has created the experiment definition.
Creation date	Indicates Creation date of the Experiment.
Show of all users	Select this check box to view the Templates saved by all users. If not selected, the list will display the Templates saved by the current user only.
Reaction Station Cell list	List of Reaction Station cells from where the user can select cell(s) for loading the Experiment.
Select	Click the Select Check Box to choose a cell for the Experiment.
Cell #	Indicates the selected cell number
Status	Indicates the availability of the cell to run an experiment.
Load template for Viewing & Editing	Select this check box, to view and edit the selected template.

14.3. Managing temperature, stirrer speed and User action settings of the Experiment.

14.3.1. Managing Temperature Settings

To insert a Temperature Ramp.

1.　From the Experiment screen select 'show cursor' option. Select a cursor point on the Temperature profile, and then select 'Insert Ramp'. Right click again to display a pop-up menu.
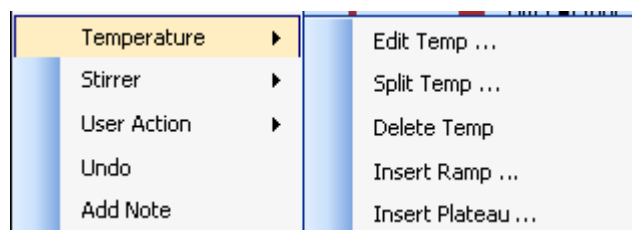
2.　Select **Temperature >> Insert Ramp** from the pop-up menu.
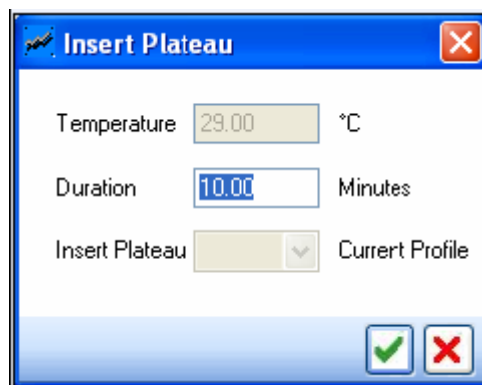
3.　**Insert Ramp** window appears.

The following table gives the details of the attributes that has to be filled in for the Insert Ramp operation.

Field Name	Description.
Leading ramp	Specifies Attributes of Leading ramp.
From	Specify the start Temperature for the Leading ramp.
To	Specify the end Temperature for the Leading ramp.
Define Duration.	Select 'Define Duration' to specify ramp rate for the Leading Ramp °c/minute.
Plateau	Specifies Attributes of the Plateau.
At	Specifies the Plateau Temperature.
For	Specifies the duration of the Plateau.
Trailing ramp	Specifies Attributes of Trailing ramp.
From	Specify the start temperature for the trailing ramp.
To	Specify the end temperature for the trailing ramp.
Define Duration	Select' Define Duration' to specify the Ramp Rate duration for the trailing ramp in minutes
Define rate	Select 'Define Duration' to define the Ramp Rate for the trailing ramp in °c/minute.

4.   Enter the details and click [✓] to complete the insert ramp operation.

To Insert a Temperature Plateau.

1.   On the Experiment screen right click and select **show cursor** option, then select a cursor point on the temperature profile after which the plateau needs to be inserted.

2.   Right click again to display a pop-up menu. **Select Temperature >> Insert Plateau** from the pop-up menu.

3.   The I**nsert Plateau** window appears.

The following table gives the details of the attributes that have to be filled in for the Insert Plateau operation.

Field Name	Description.
Temperature	Target Temperature of the plateau
Duration	Plateau Duration.

4.   Click [✓] to insert the Plateau at the given location.

To Edit the Temperature of the Experiment.

1.   On the Experiment screen right click and select show cursor option, then select a cursor point on the temperature profile that is to be edited.

2.   Right click again to display a pop-up menu. **Select temperature >> Edit Temp** from the pop-up menu.

3.   Depending upon whether the selected point on the Temperature Profile falls on a ramp or a plateau, either the **Edit Ramp** or the **Edit Plateau** screen will be displayed.

4.   The **Edit Ramp** and the **Edit Plateau** screens contain the same fields as the Insert Ramp and the Insert Plateau screens respectively. In this case they will contain existing values.

5.   Make the necessary modifications and click [✓] to complete the Edit Temp operation.

Note: If the temperature profile near the point selected to be edited is being executed at the point in time and the user selects Edit Temp option than an error message will be displayed.

Presently you canno: edit this profile item.

OK
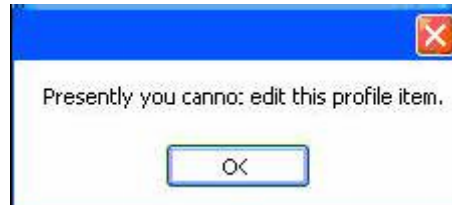
To Split the Temperature.

1.   On the Experiment screen right click and select show cursor option. Select a cursor point and right click again to display a pop-up menu.

2.   Select **Temperature >> Split Temp** from the pop-up menu. The Split plateau window appears.

Split Plateau

Original duration is 1.00 minutes

Split at [0.20] minute from start
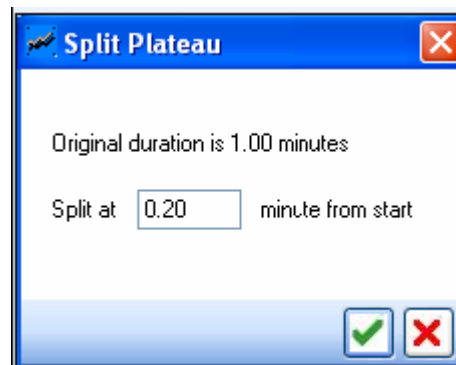
3.   In the above screen shot, the split is defined at 0.20 minutes from the start.

To delete a Temperature.

1.   On the Experiment screen right click and select show cursor option, then select a cursor point on the temperature profile that is to be deleted.

2.   Right click again to display a pop-up menu. Select Temperature >> delete temp from the pop-up menu.

Note: if the Temperature profile has the Ramp Up and Ramp Down at the same position (that is the start temperature and the end temperature is the same) and the user selects delete temp option then an error message will be displayed.

Sorry. Presently you cannot delete the selected temperature profile.

OK
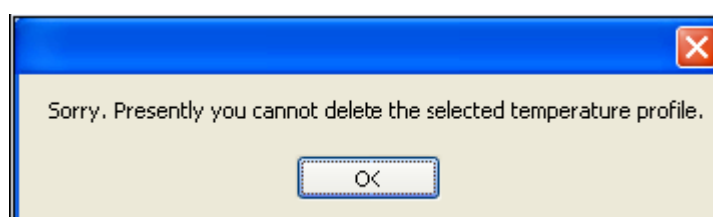
14.3.2. Managing the Stirrer Settings.

To insert Stirrer Speeds.

1. On the Experiment screen right click and select **show cursor** option, then select a cursor point on the Stirrer profile after which the new speed needs to be inserted.

2. Right click again to display a pop-up menu. **Select Stirrer >> Insert Speed** from the pop-up menu.
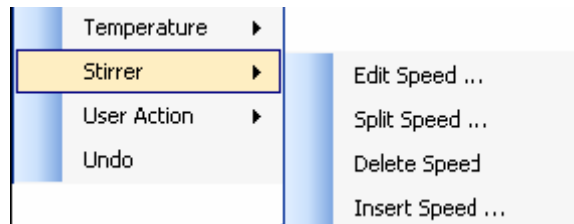
3. The **Insert Speed** window appears.
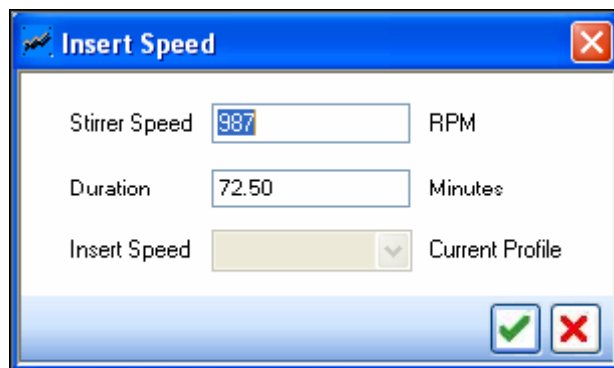
The details of the attributes of inserts speed is given in the following table.

Field Name	Description
Stirrer Speed	The target Stirrer Speed
Duration	The duration for which the Stirrer needs to maintain the speed.

4. Enter the data in the Insert Speed screen and click [✓].

To Edit Stirrer Settings.

1. On the Experiment screen right click and select **Show Cursor** option, then select a cursor point on the Stirrer profile that is to be edited.

2. Right click again to display a pop-up menu. **Select Stirrer >> Edit Speed** from the pop-up menu.

3. The edit Stirrer Speed window appears.
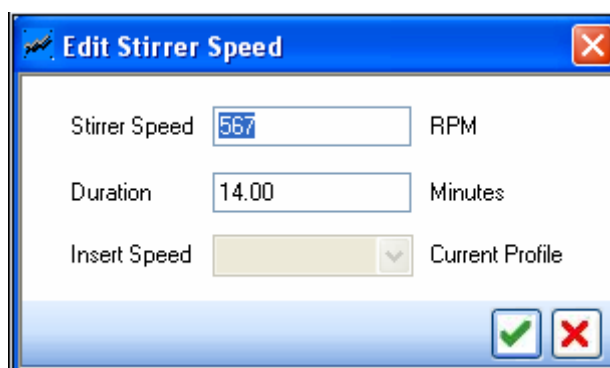
4. This has the same fields as that of the Inserted Speed screen. The user can modify the existing user action attributes.

To Split Speed.

1. On the Experiment screen right click and select **Show Cursor** option, then select a point on the stirrer profile from where it needs to be split.

2. Select **Stirrer >> Split Speed** from the pop-up menu. The **Split Stirrer Profile** window appears.

The details of the attributes of the Split Stirrer Profile are given in the following table.

Field Name	Description.
Original Duration	The presentation duration of the selected stirrer profile.
Split at	Where to split the stirrer profiles with respect to the start. This value can never `be more than the original duration.

If the user enters a value equal to or greater than the original duration then an error message is displayed.
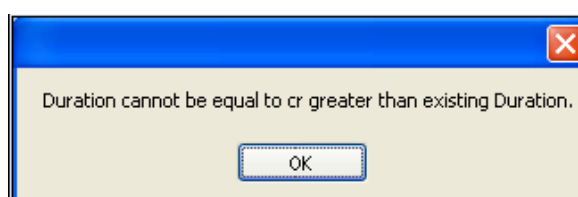
To Split Speed.

1. On the experiment screen right click and select **Show Cursor** option, then select a point on the stirrer profile which needs to be deleted.

2. Select **Stirrer >> Delete Speed** from the pop-up menu. The **Split Stirrer Profile** window appears.

14.3.3. Managing the User Actions.

To Insert User Action.

1. On the Experiment screen right click and select **Show Cursor** option, then select a point after which the User Action needs to be added.

2. Right click again to display a pop-up menu. **Select User Action >> Insert User Action** from the pop-up menu.
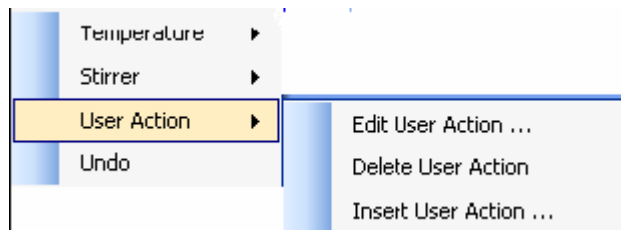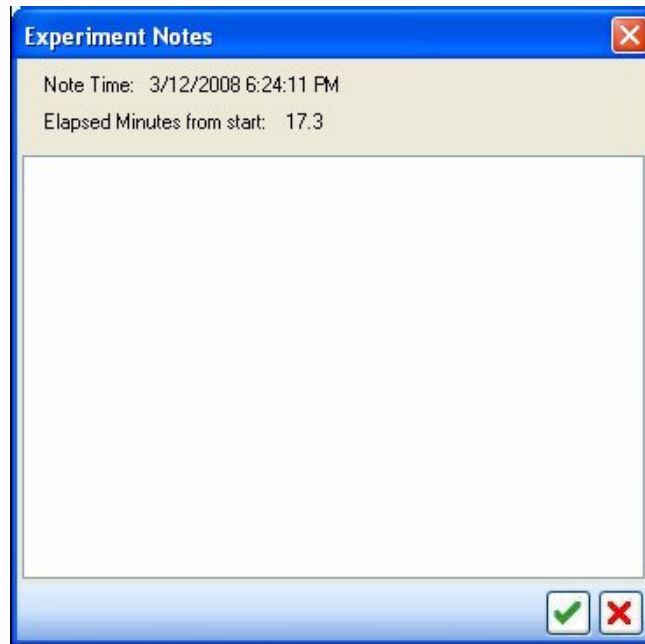

3. The Insert user Action window appears.
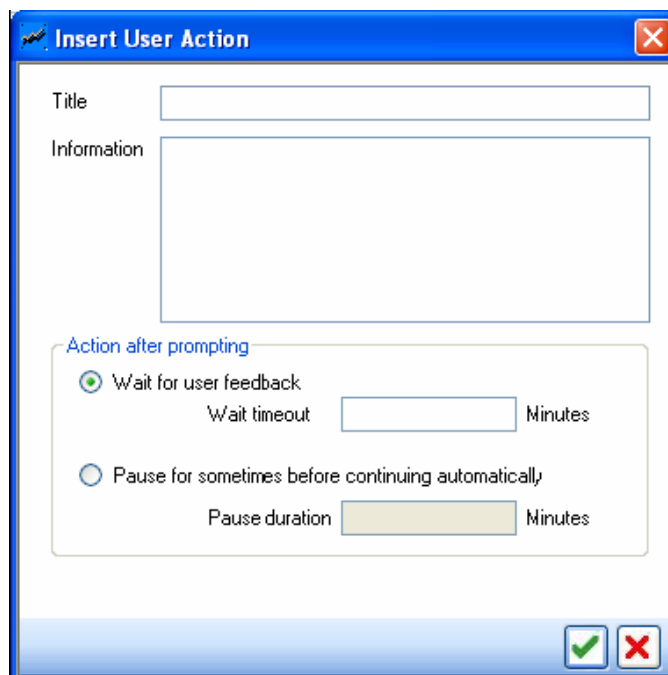
The details of the attributes of Insert user Action is given in the following table.

Field Name.	Description.
Title	The name or Title of the User Action.
Information	Free format text describing the User Action.
Action after prompting	This groups the actions that can be performed by the system once the User Action prompt is displayed during an Experiment run
Wait for user feedback	Indicates that the Experiment will wait for feedback from the user before continuing. However, if the user does not give any feedback for the **Wait timeout** period, the Experiment will start running automatically.**
Wait Time out	Specify time out for user action, you will have to wait until that time; you can not cancel the user action.
Pause for sometime before continuing automatically.	Indicates that the Experiment will start running automatically after the specified **Pause duration**, without the need for any user input.

** While running the Experiment, if the pause for sometime before continuing automatically option is selected then the experiment is paused for some time and is resumed automatically after the pause duration is over unless the user clicks on the complete button before that. The following figure displays the Pause user action.
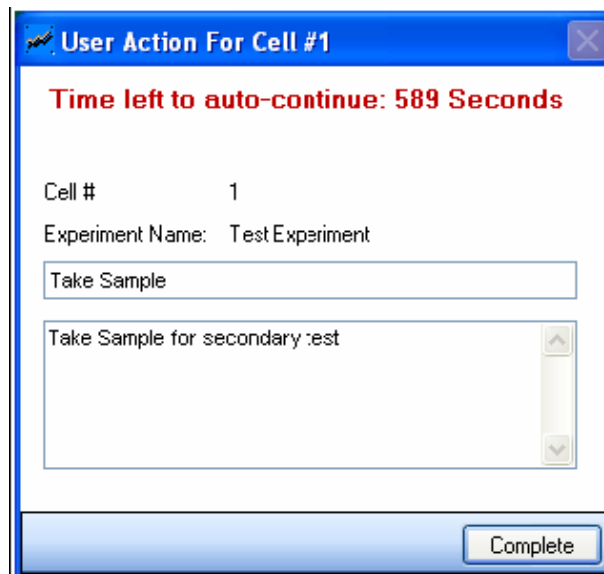
4.   Enter the data in the Insert User Action screen and click [✓].

To Edit User Action.

1. On the Experiment screen right click and select **Show Cursor** option, then select the User Action to be edited.

2. Right-click again to display a pop-up menu. **Select User Action >> Edit User Action** from the pop-up menu.

3. The **Edit User Actio**n window appears.
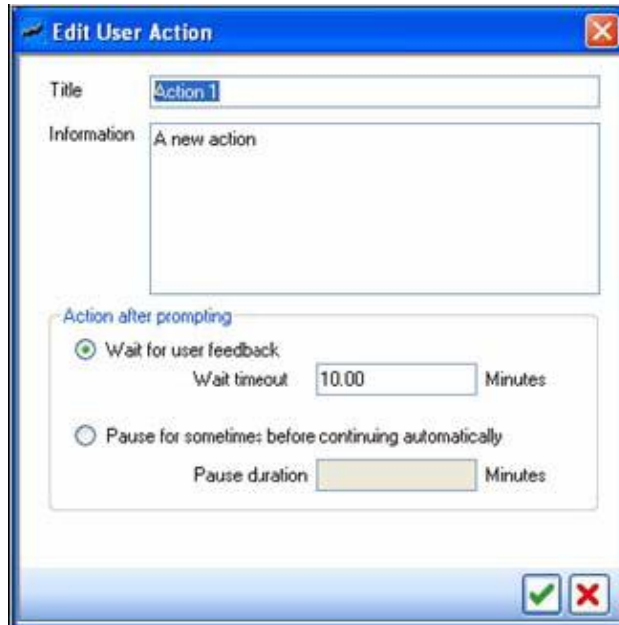
4. This has the sane fields as that of the Insert User Action Screen. The user can modify the existing User Action attributes.

To Delete User Action.

1. On the Experiment screen right-click and select **Show Cursor** option, then select the User Action that needs to be deleted.

2. Right-click again to display a pop-up menu. **Select User-Action >> Delete User Action** from the pop-up menu.

14.4. Adding a Note.

To add a note for a specific elapsed time during the Experiment.

1. On the Experiment screen right click and select **show cursor** option, then select the User Action that need to be deleted.

2. Right-click again to display a pop-up menu. Select **User Action >> Delete user Action** from the pop up menu.

3. The Experiment Notes window appears.
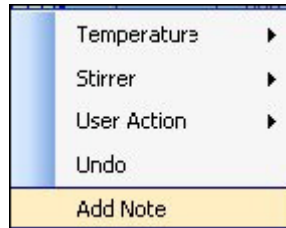
14.5. Copying and pasting an Experiment.

The details of the attributes of Insert User Action are given in the following table.

Field Name	*Description*
Note Time	Actual Time (obtained after the first profile has started executing).
Elapsed Minutes from Start	Elapsed minutes from the start of the experiment.
Notes Text	User enterable free format text.

14.5.1. Enter the Note and click to save

To Copy and Paste an Experiment Definition.

This feature allows the user to copy Experiment definition from one cell and paste it to another cell as a new Experiment Definition.

1. On the Experiments screen select a cell loaded with an Experiment.

2. Right click on the cell to display the pop-up menu, and then select Copy Experiment.
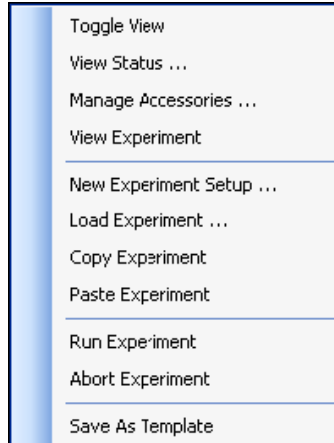
3. Choose an empty cell where the copied Experiment Definition needs to be loaded and select **Paste Experiment** from the pop-up menu.

14.6.   Viewing 'My View'.

To View 'My view'.

14.6.1.   On the Experiments screen, clock **My View** tab.

14.6.2.   **'My View'** screen is displayed.
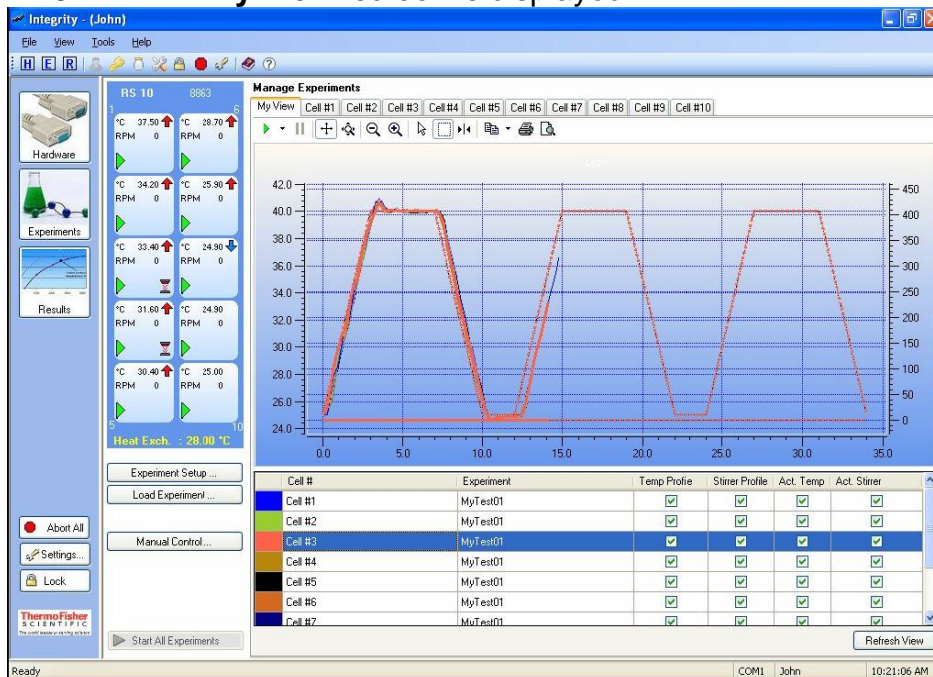
Multiple experiment profiles loaded in different cells and their run progress can be viewed by in this screen.

Data from each cell are displayed in different colours. The profile graphs are plotted in dotted lines while the actual readings are plotted in solid lines.

When a specific cell is selected from the table below the graph, the plot for that cell is highlighted in thicker line in the graph. Using the check boxes in the table the user can choose what to plot or not to plot in the graph. The changes made in the check boxes will come into effect after the Refresh View button is clicked.

15. RUNNING AN EXPERIMENT.

This module describes how a User can run and monitor Experiments for a cell.

To Run an Experiment.

1. From the RSCPS screen, click [Experiment Setup ...] tab.

2. Complete the procedure for creating new experiment setup as described in ***section 6.1 Experiment Setup***. Click [✔] to load the experiment in the selected cell.

3. Right click on the cell in which the experiment is loaded and then click on Run Experiment from the pop-up menu.
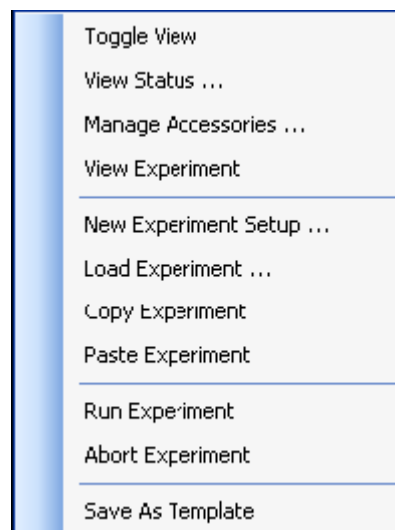
Alternatively, the user can also click on the run button to start a loaded Experiment. To start all the Experiments at once, press the Start All Experiments button. Once the Experiment starts running, the Run Button will be disabled.
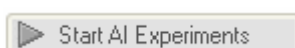
The following figure displays the experiment in running order.
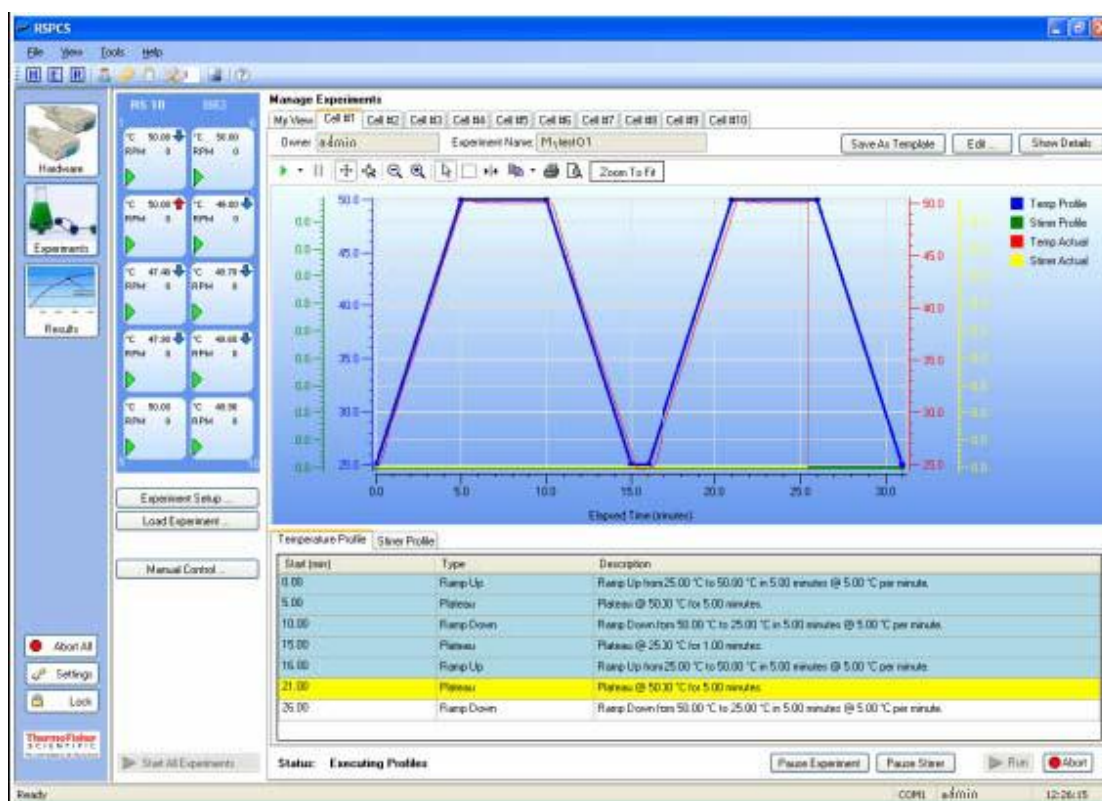
In the graph, the vertical red line tracks the progress of the Experiment.

In the tabular view, the yellow row marks the profile step that is currently being executed.

To Pause and Abort a Running Experiment.

To pause a when running Experiment, press the **Pause Experiment** button.

To pause the Stirrer while keeping the Experiment running, press the **Pause Stirrer** button.

Note: When the experiment is in the Pre-heating stage, it cannot be paused.

To abort an Experiment, click on the **Abort** button.

To abort all running Experiments, click on the Abort All button on the left pane of the application.

Finishing a running Experiment.

Once the Experiment is finished, the following dialog box will pop up. Here the user can specify whether the experiment data is to be saved.
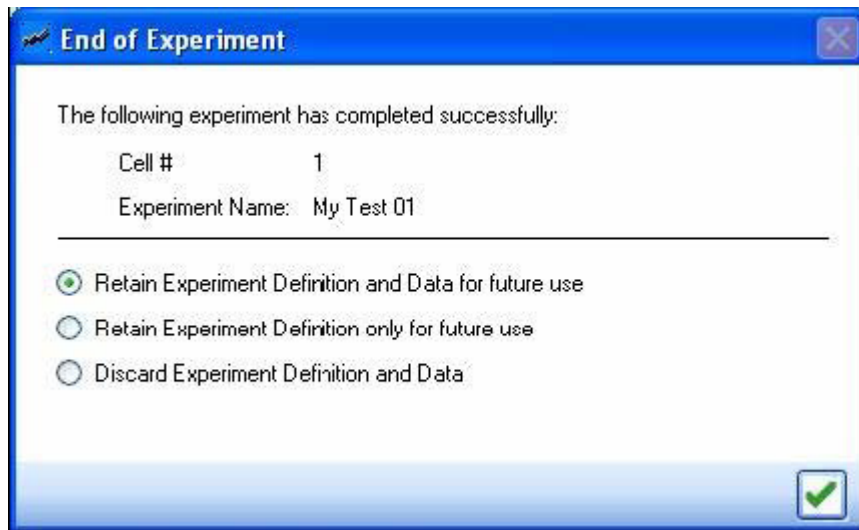
16. EXPERIMENT RESULTS.

In this module the user can view the experiment results. The user is also allowed to add additional information about the experiment. The main features of this module are given below:

- View multiple experiment results at a time.

- View different sections of the experiment results all at once.

- Update additional information about the Experiment.

- Import existing experiment results.

- Export experiment results.

- Load previously stored experimental results.

- Save additional information about the results.

- Store experiment results in **'Excel'** format.

16.1.   Viewing the Experiment Results.

To View Experiment Results.

1.   On the 'INTEGRITY' main screen, click '**Results**'.

2.   Experiment Results screen is then displayed.
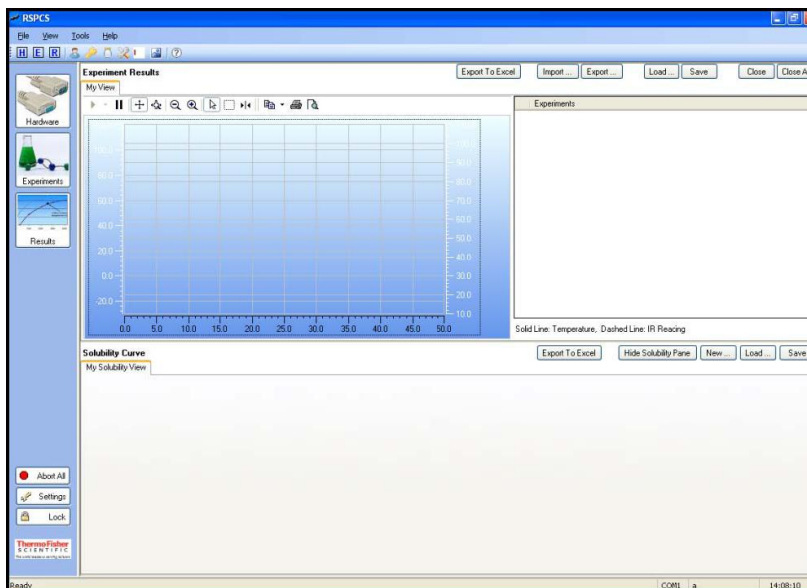
Note: The Experiment Results can also be accessed by clicking on the toolbar. You can also access Results section from the View Menu on the menu bar by selecting the 'View Results' option.

16.2.   Loading an Experiment Result.

To load an Experiment Result.

1.   From the Experiment results screen, click Load…
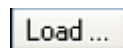
2.   Load Experiments results Window appears.
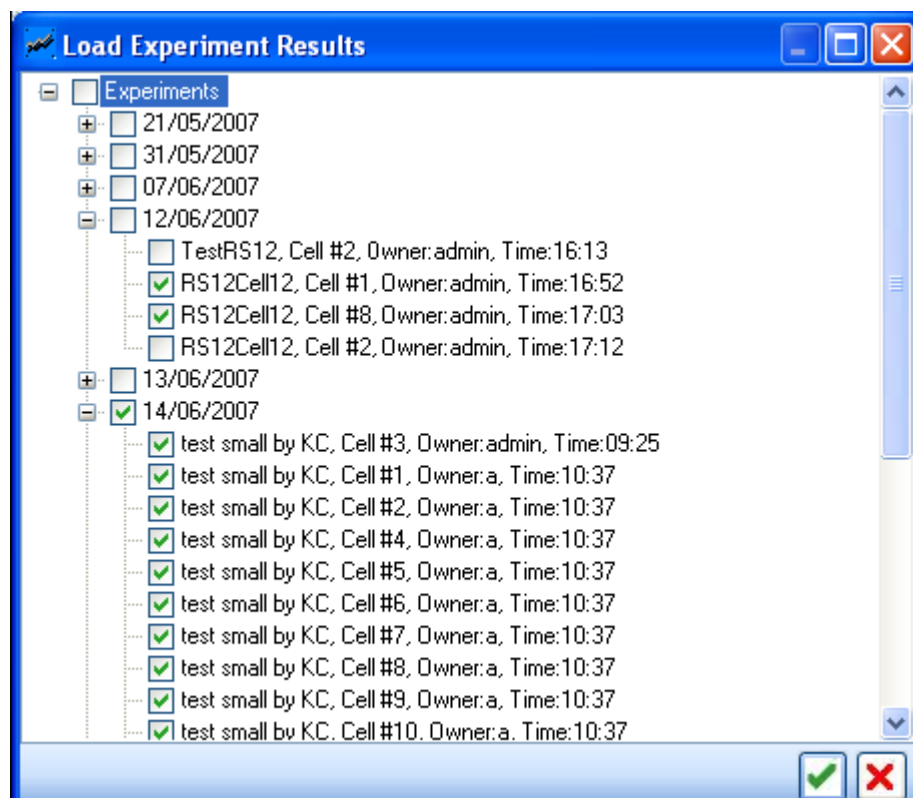
3.   From the Experiments Results screen, select the experiment for which the results have to be displayed, the click to view the results. This will load the Experiment data in a new **Experiment Result** tab.

4. For viewing the data point figures of the loaded experiment, click on **Results Data** tab of the loaded Experiment.
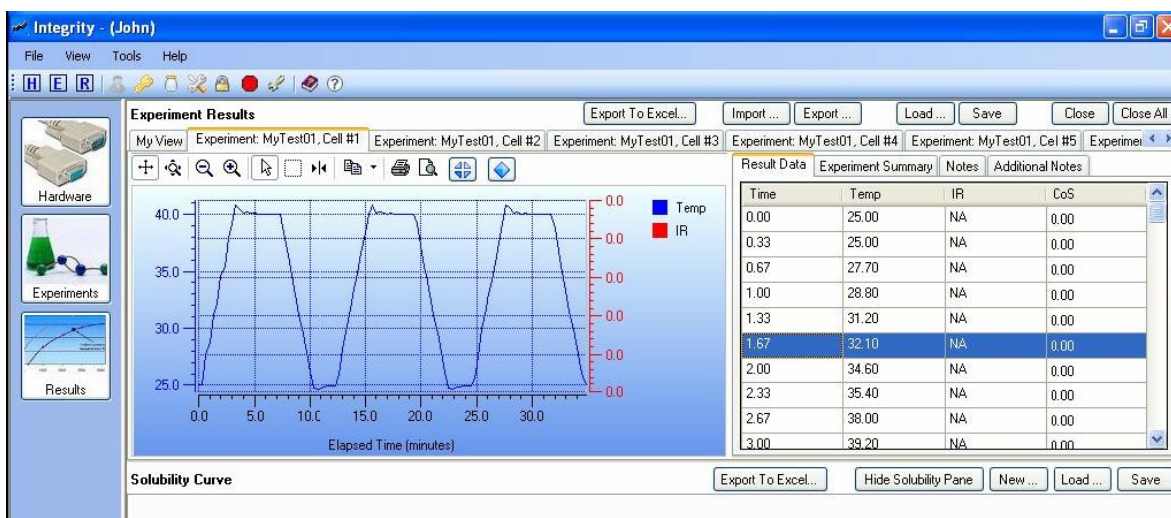
5. For viewing the summery of the loaded experiment, click on **Experiment Summary** tab of the loaded experiment.
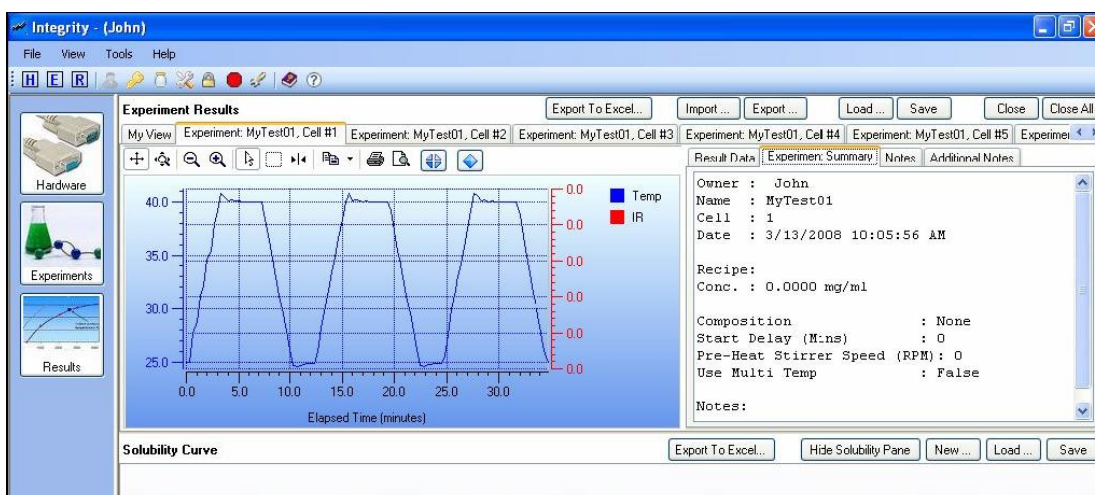
6. Click the **Additional Notes** tab for the loaded Experiment Result.
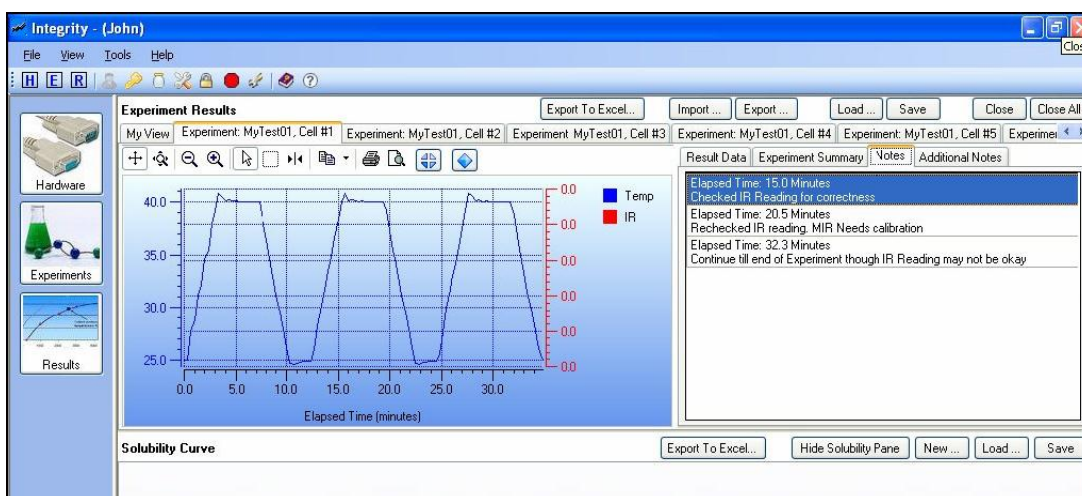
7. The user can type the additional information and then click on **Save** to add the notes to the Experiment results.
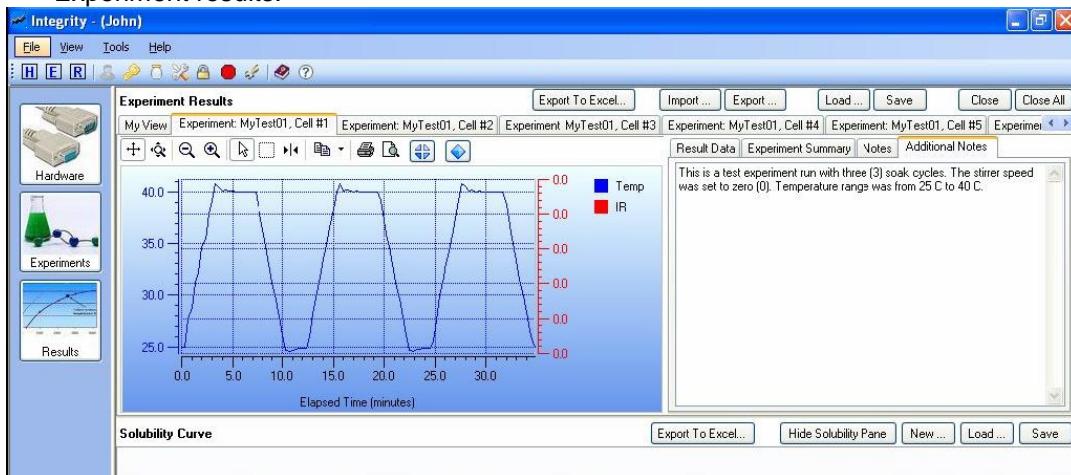
8. User can type the additional information and then click on Save to add the notes to the Experiment results.

16.3. Viewing 'My View'.

1. On the Experiments results screen, click My View tab.
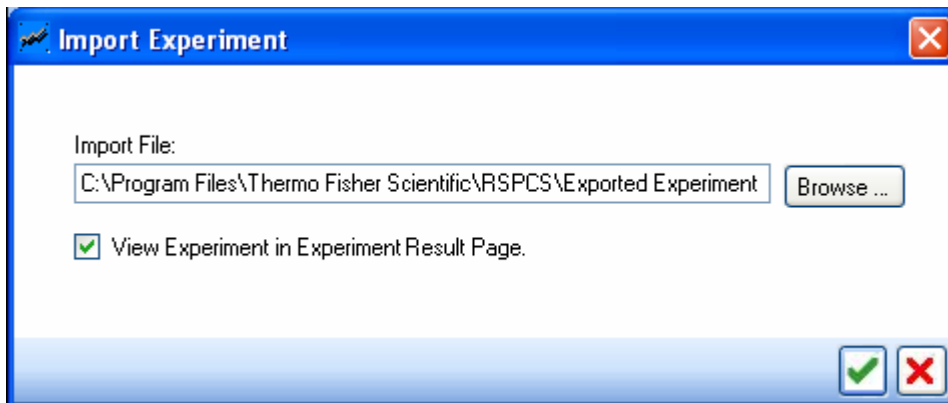
2. 'My View' screen is displayed.
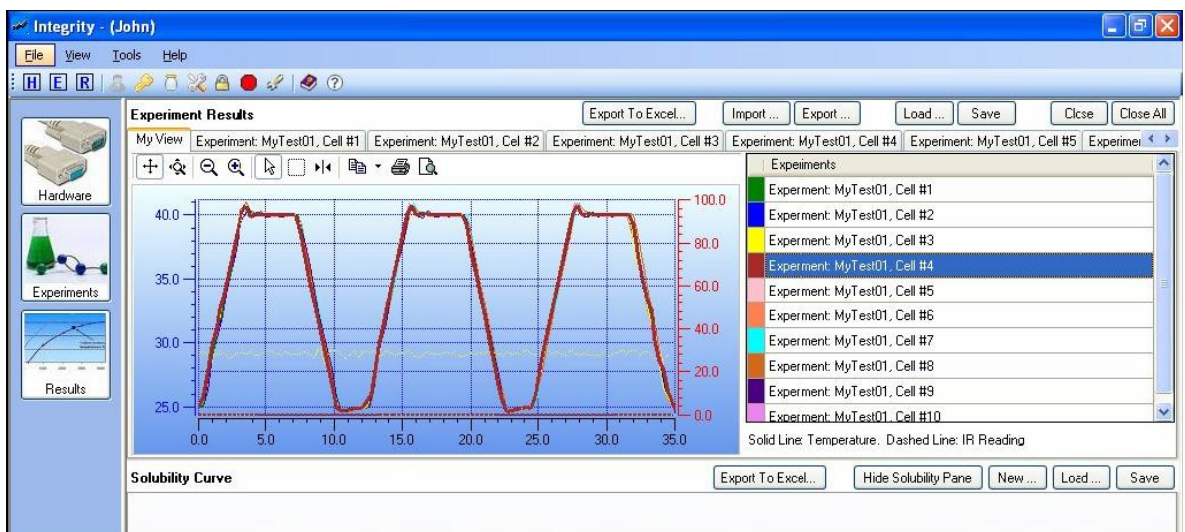
Multiple experiment results can be viewed by using My View option. Different Experiments are represented by different channel colours.

16.4.   Importing Experiment Results.

To Import Experiment Results.

1.   On the Experiment Result screen, click **Import** [Import ...]

2.   **Import Experiment** window appears.

3.   Click **Browse** to select an exported Experiment file from the file system.

4.   Select the 'View Experiment in Experiment Results Page' check-box, if the user wants to
     view the experiment result after importing.
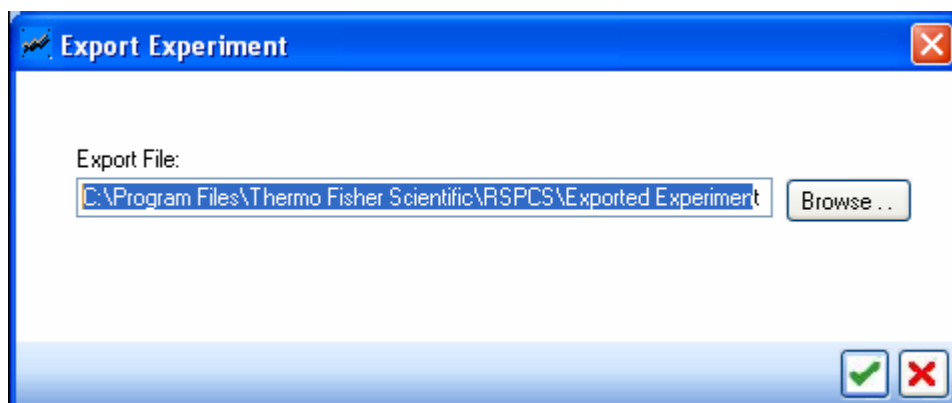
5.   Click [✓] to complete the import operation.

16.5.   Exporting Experiment Results.

To Export an Experiment Result.

1.   On the experiment results screen, click Export.

[Export ...]

2.   Export Experiment window appears.

3. Specify the Export File Name and select a location in the file system from where it needs to be exported.
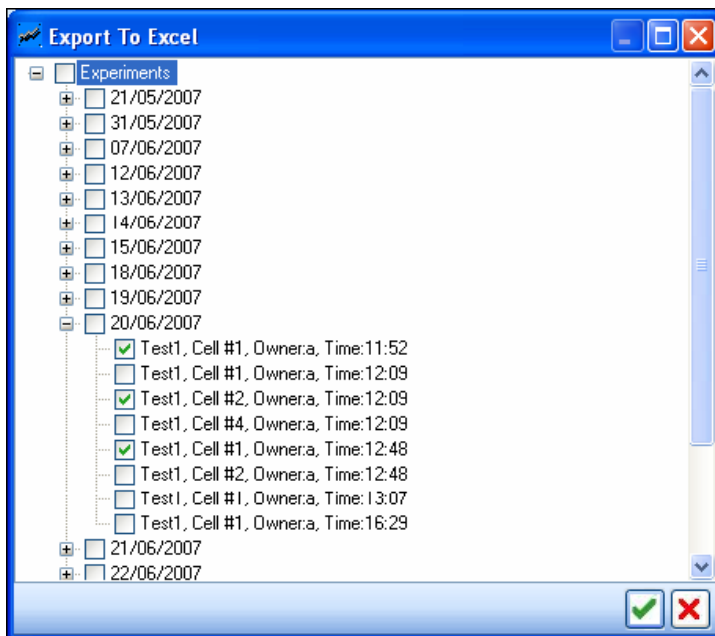
4. Click to complete the export operation.

16.6.   Exporting Experiment Results to EXCEL.

To Export an Experiment result to Excel.

1. On the Experiment Results screen, click **Export to Excel.**
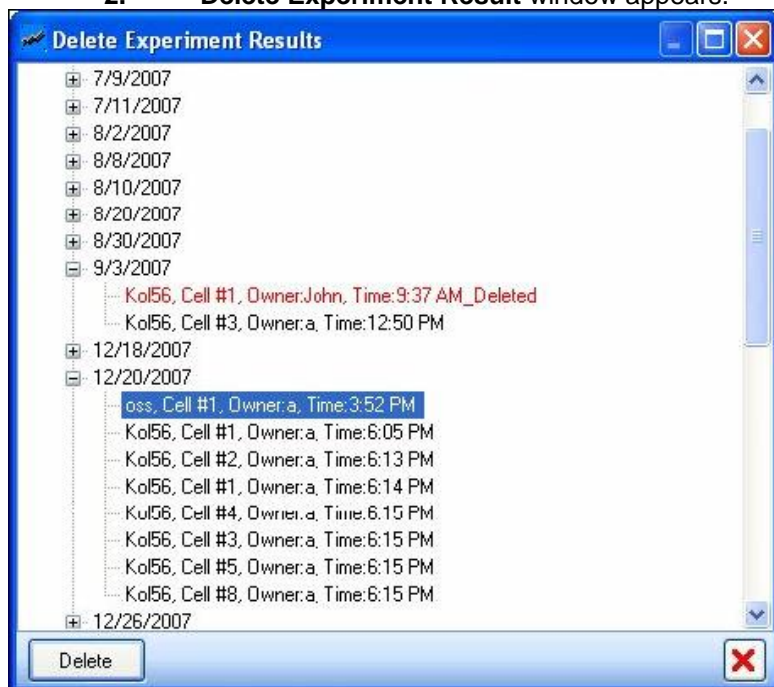

2. **Export to Excel** window appears.

3. From he Export to Excel screen, select the Experiments that are to be exported, then click .

Note: Exporting to EXCEL may take some time to finish.

16.7.   **Deleting Experiment results.**

To delete an Experiment result Data.

1.   From the Main Menu click **File >> Delete Experiment Data** option.

2.   **Delete Experiment Result** window appears.

3.   Select the Experiment which needs to be deleted and click on the **Delete** button.

4.   The system will open a password verification window. Enter the correct login password.

5.   The system will delete the Experiment and mark it in red and append the text _ **Delete** to the Experiment name. This is only for visual conformation to indicate which tree item was deleted.

17. DISSOLUTION AND SOLUBILITY CURVE.

This module describes how to create and modify Dissolution and Solubility curves from Experiment Results.

To Go To Solubility Curve Section.

1.   On the 'INTEGRITY' main menu screen, click **Results**.

2.   The Experiment Results and Solubility Curve screen is displayed.

17.1. Creating a new Solubility Curve.

To create a new Dissolution / Solubility Curve.

1. In the Experiment Results panel, load the Experiments results from where you want to derive the Dissolution / Solubility curve.

2. On the Solubility Curve screen, click **New**.

New ...
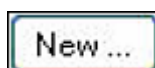
3. The Solubility Curve name screen is displayed, enter a name for the solubility curve and then click **OK**.
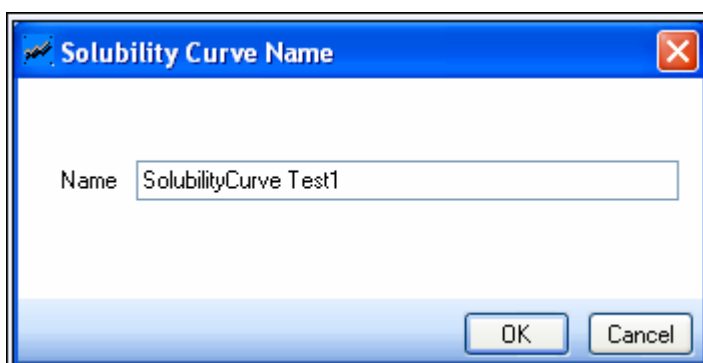
4. Going back to the Experiment Results panel, select an Experiment Data and Select Data cursor ▶◀ .

5. Locate the Dissolution point on the Experiment results and mark Dissolution temperature using the ⊕ button on the graph tool bar. Similarly, to mark the Crystallisation temperature use the ◆ button.

6. Enter Concentration Value for both the temperatures in the Insert Concentration window and click OK.
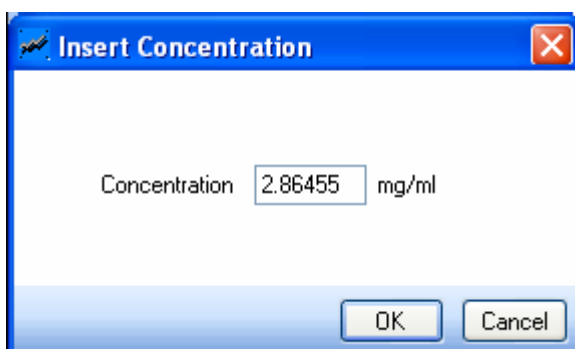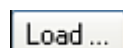
7. Dissolution (or Crystallisation points) will start being plotted on the newly created Dissolution (or Solubility graph).

Solubility Curve

My Solubility View | SolubilityCurve Test1
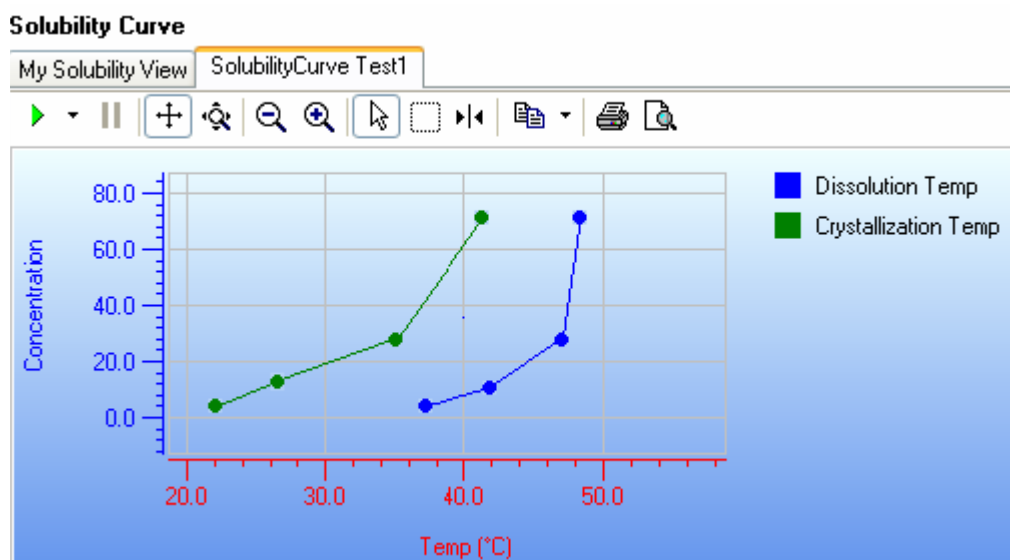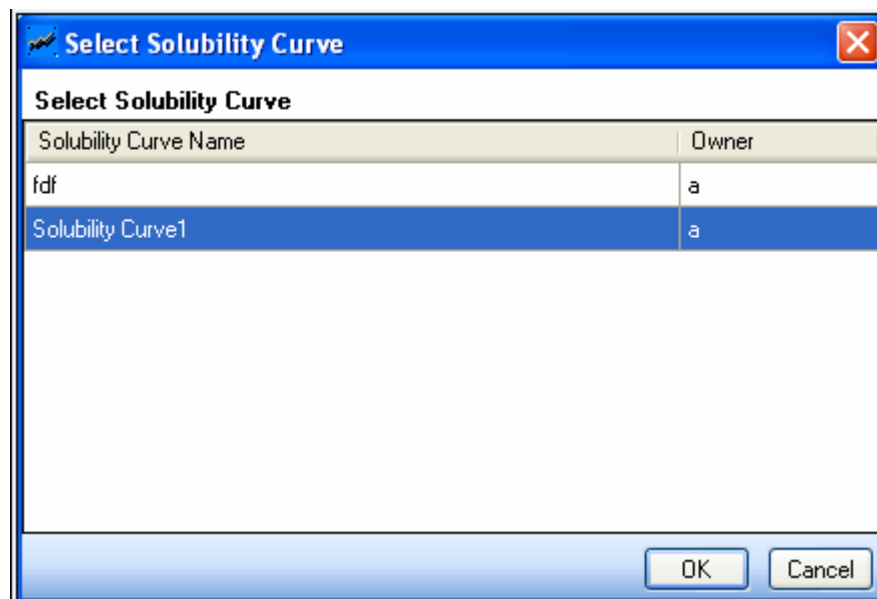

17.2.   Loading a Solubility Curve.
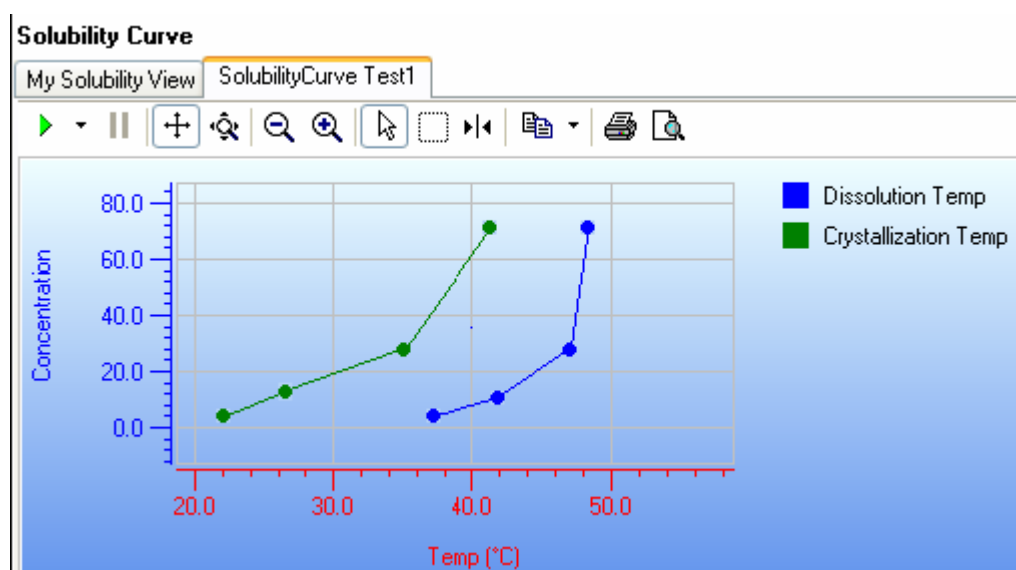
To load a Solubility Curve.

1. From the Solubility Curve section on the Experiment results screen, click **Load**.
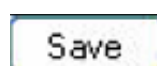
Load ...

2. The select Solubility Curve window appears.

3. To view the solubility curve, select a Solubility Curve and then click **OK.**

Solubility Curve

| My Solubility View | SolubilityCurve Test1 |

17.3. Other Functionalities of the Solubility Curve.

General Functionalities.

Save

Save: User can modify the existing curves and select the save option to save the changes for the selected solubility curve. User can also save the changes done to the new solubility curve by using this option.
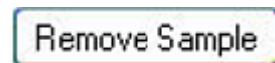
Export To Excel...

Export to Excel: the user has to click on this button to export the solubility curve into Excel format. User has to name the solubility curve and save it.

Hide Solubility Pane

Hide Solubility Pane: User can hide the solubility pane by selecting option.

To remove Dissolution and / or Crystallisation point(s) from a Concentration row:-

Remove Sample

Remove Sample: User can remove the selected Concentration (i.e. both Dissolution Temperature and Crystallization Temperature) by clicking this option. The user gets a warning message as shown in the following figure.

Warning

Do you want to delete the selected sample?

| Yes | No |
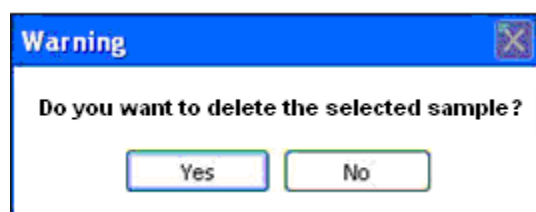
Select **Yes** to delete the Solubility Curve from the application.

Remove Diss. Temp.

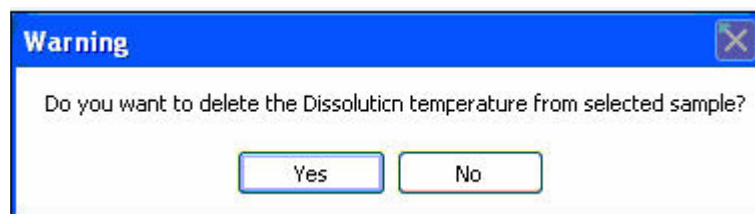**Remove Dissolution Temperature:** the user can delete the Dissolution Temperature of the selected Concentration by clicking on this option. The user gets a warning message as shown in the following figure.

Warning ✕

Do you want to delete the Dissolution temperature from selected sample?

Yes   No

Select **yes** to delete the dissolution temperature of the selected solubility curve.

Remove Crys. Temp.

Remove Crystallisation Temperature: The user can delete the Crystallisation Temperature of the selected Concentration by clicking on this option. The user gets a warning message as shown in the following figure.

Warning ✕

Do you want to delete the Crystallization Temperature from selected sample?

Yes   No
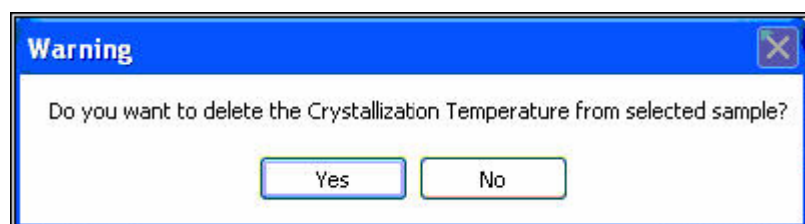
Select **yes** to delete the Crystallisation Temperature of the selected Concentration.

To view the corresponding Experiment Result of a Concentration row.

Once the user double clicks on any one of the Concentration rows from the tabular view, a message box is displayed.

Confirm ✕

Do you want to see the corresponding Experiment data?

Yes   No
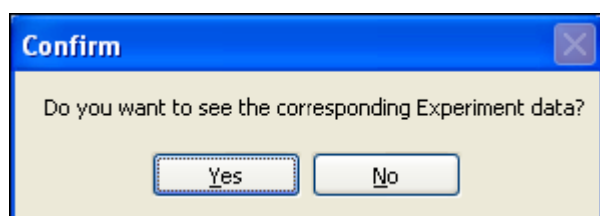
If the user choose **'Yes'** the corresponding Experiment Results, from where the Dissolution and / or Crystallisation points were obtained will open in the Experiment Results panel.

18. GENERAL SETTINGS.

This module explains how the user can change the General Settings for the 'INTEGRITY' application.

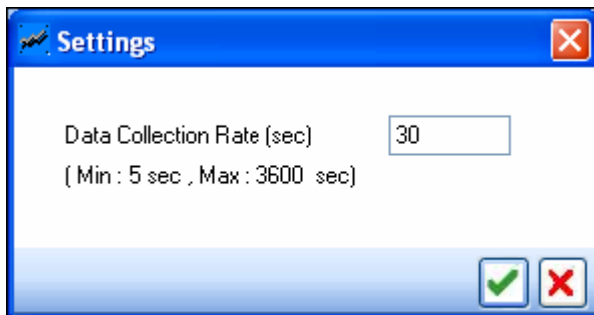### 18.1.   Settings.

To Change Settings attribute.

1.   From the Main Menu, select the Tool >> Settings option.

     Or

     Click on 🔧 icon in the Tool Bar.

2.   The Settings window appears.

3.   Specify the Data Collection rate in Seconds, click ✔ to finish the operation.

19. CLOSING THE APPLICATION.

Clicking on the **File >> Exit** option of the main menu, or using the windows close button in the top right corner of the screen, close the 'INTEGRITY' Client application.

Note: Before closing a UI, the user must first ensure that no Experiments are running. If there are any running experiments, the UI will prompt the user to end those Experiments first.

Note: If there are any Active Controls, the application will worn the user. The user must then confirm that he / she really wants to close the application.

20. CUSTOMER SUPPORT.

For help and support in using this product, please contact Customer Services at the following address.

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- **www.electrothermal.com**

For the America's and Canada, contact:
Techne Incorporated, 3 Terri Lane,
Suite 10 Burlington, NJ 08016 USA.

Toll free:800-225-9243Tel: 609-589-2560
Fax: 609-589-2571
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Appendix 'A' Integrated System Connection.

21. CFR 21 Part 11 COMPLIANCE

Bibby Scientific make no claim that this software product is compliant with US Code of Federal Regulations, Title 21, Volume 1. However 21 CFR Part 1 technical controls are built in to this product.

Please remember, it is the responsibility of the user to implement the Procedural and Administrative (and correctly and consistently) Controls along with using products with the correct Technical Controls for overall Part 11 compliance.

22. NOTES.

23. DISTRIBUTION INFORMATION.

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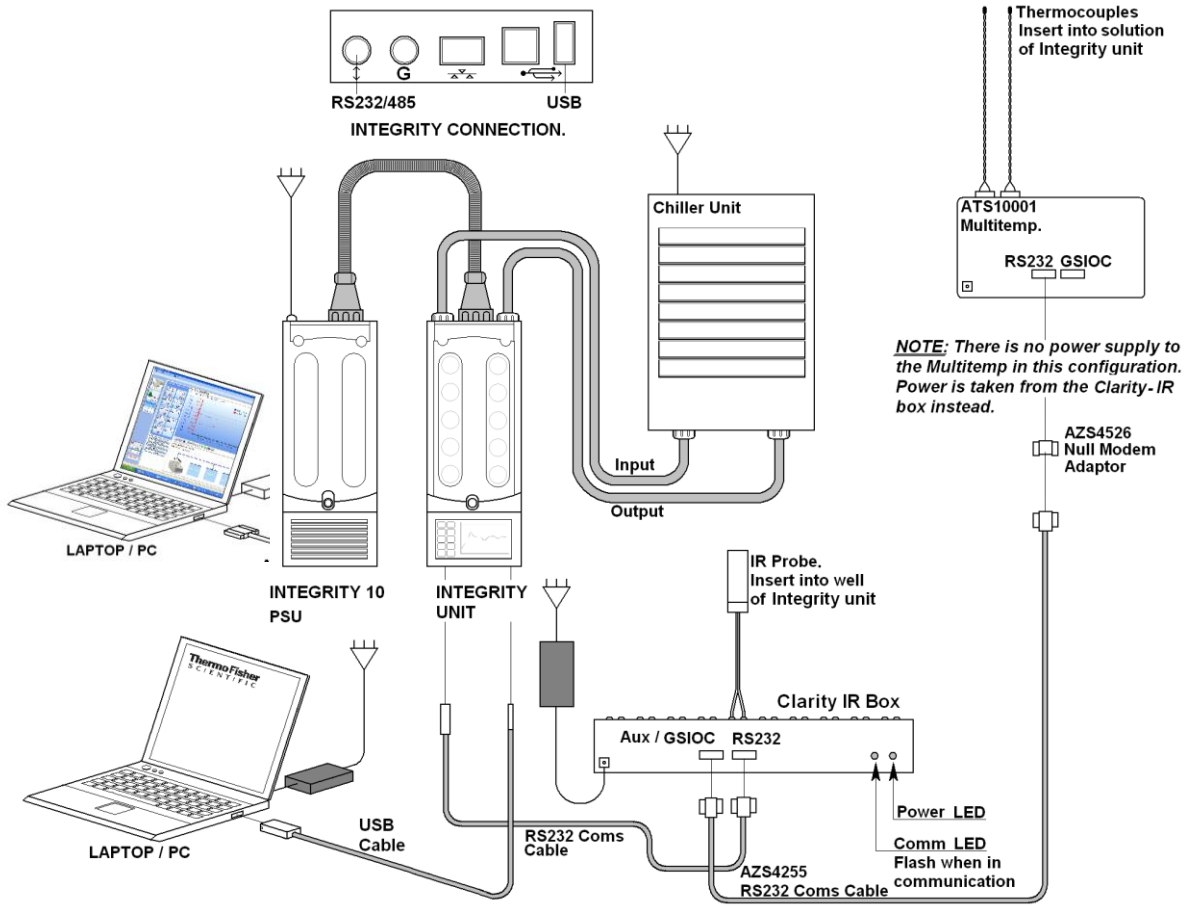Great Britain.

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