

LabCollector



User Manual For Sequencing Service Management (SSM)

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Summary

1- INTRODUCTION	4
2- USER	6
2-1. View order status	6
2-2. Place order	10
2-3. Result	11
2-4. Primer	12
3- ADMIN.....	15
3-1. User management	16
3-2. View order status (current)	19
3-3. View order status (archived)	24
3-4. Result	25
3-5. Primer	27
3-6. Standard services	29
3-7. Sample type	31
3-8. Plate	33
3-9. Tube	37
3-10. Naming Convention.....	39

4- SEARCH..... 42

4-1. Search screen for the admin 42

4-2. Search screen for the user 43

5- UPGRADING AND UPDATING..... 46

1- INTRODUCTION

Thank you for choosing AgileBio solutions for the management of your lab. **SSM Add-on** is a web-based solution allowing efficient management of clients and sequencing orders. Users will be able to place orders, check sequencing status and download results.

Service admin will manage orders, organize them on plates or single tubes and easily upload results.

You can get **SSM Add-on** simply by downloading from www.labcollector.com. LabCollector software has to be installed first as it contains the framework. LabCollector support documents for installation are available on our website. **SSM Add-on** can be installed on any operating system (Windows, MacOS X and Linux).

Unzip and paste **SSM Add-on** Folder in the directory:

AgileBio Folder > LabCollector > www > Extra_modules.

Open LabCollector, the **SSM Add-on** module is now activated. Click on the module to finish the installation.

This is the add-ons module provided for the LabCollector application. Using this module the user can track the sequencing service flow. Sequencing Service Management (SSM) module has been developed as one such add-ons using PHP, MySQL, AJAX and JavaScript. It is completely independent of the existing Lab Collector except that, the application uses the security features of Lab Collector. This application can be accessed by two types of users the 'Admin' and the 'User' respectively.

User can place/submit the orders and track the status of the orders. User can search, edit, and cancel the order (An order may contain one or more samples). User will get the result/result files when the order is completed and the user can download the result files.

Admin can check the submitted order, cancel the order and create jobs. Admin can assign the plate or tube to the order and also manage the plate or tube. Admin will be able to assign and change the status of order, and also upload the result files. Each sample has two result files, and the name of the result files follow a specific naming convention. These naming conventions depend on the location where the sample is processed, in the plate or tube.

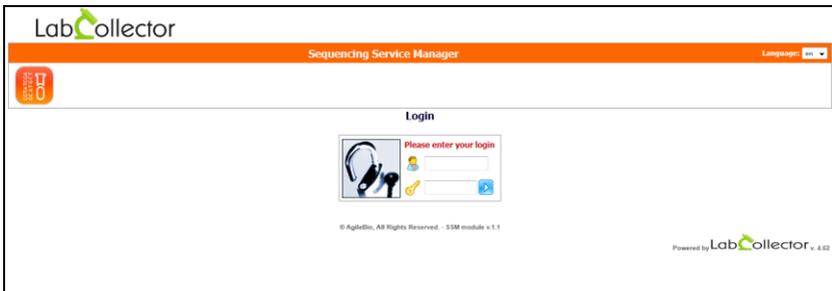


Fig N°1.1 – Login Page

2- USER

After logging in with the “User” credentials, you will get the following screen.

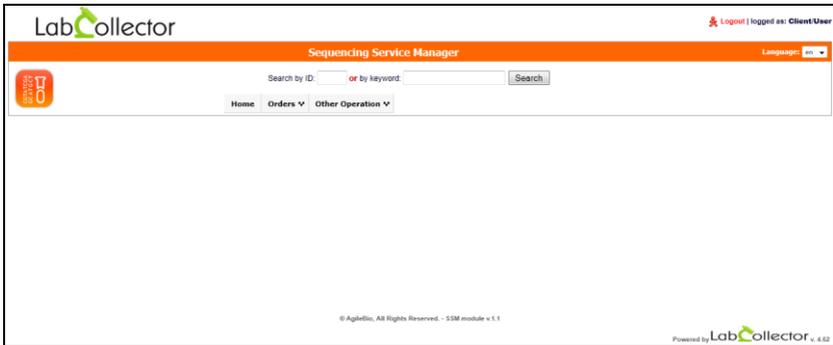


Fig N°2.1 – User Page

User can perform the following operations:

- Order operation
 - View order status
 - Place order
 - Results
- Other operation
 - Primer

2-1. View order status

To view the order status, the user can access the “Order Manager” by hovering over the “Orders” menu and selecting the “View Order Status” option will display the following screen (fig N°2.2).

The screenshot displays the 'Order Manager' section of the LabCollector Sequencing Service Manager. It features a search bar at the top with options to search by ID or keyword. Below the search bar are navigation tabs for 'Home', 'Orders', and 'Other Operation'. The main content is a table with the following data:

#	Order ID	No. Of Sample	Date	Status	Print	View	Cancel
1	1	3	2009-03-04	In progress	Print	View Samples	Cancel
2	5	1	2009-05-06	Assigned	Print	View Samples	Cancel
3	6	1	2009-05-27	Assigned	Print	View Samples	Cancel

At the bottom of the table, there is a 'Display' dropdown menu set to 'Select' and a 'Go Page' button. The footer includes the text '© Agilent, All Rights Reserved - SSM module v 1.1' and 'Powered by LabCollector v 4.02'.

2

Fig N° 2.2 – Order Manager

This screen displays the list of the orders “Assigned” and “In Progress” submitted by individual user. Application will display the following details:*

- **Order ID:** an order ID is a system identification number generated for each individual order.
- **Number of sample:** it is the number of samples associated which each individual order.
- **Date:** the date on which the order was placed.
- **Status:** the current status of the order.
- **View:** a link provided to view the details of samples associated with the order. For the details, please refer below.
- **Cancel:** to cancel the order, if status is “assigned”.

If the status of the order is “assigned” then the user can cancel that order otherwise the application will restrict the user from canceling an order.

VIEW

By clicking on the “View samples” link, user will be able to go to the “Order sample manager”. Here, the user can view all the samples as well as the details of sample(s) of the individual order (fig N°2.3).

#	Order ID	Sample Name	Purification Method	Sample Type	Primer Name	Amount	Size	Status	Result	View	Edit	Edit
1	1	Sample1		PCR product	Primer1	100,000	0	Completed	Seq ABI	View	Edit	Cancel
2	1	Sample2		PCR product	Primer1	100,000	0	Completed	Seq	View	Edit	Cancel
3	1	Sample3		PCR product	Primer2	100,000	0	Assigned		View	Edit	Cancel

Fig N°2.3 – Order Sample Manager

The screen will display the following details of the sample:

- **Order ID:** an order ID is a system identification number generated for each individual order.
- **Sample name:** name of the samples in the order.
- **Purification method:** name of the purification method used for the sample.
- **Sample type:** type of the sample like PCR-product, BAC ...
- **Primer name:** name of the primer sequence.
- **Amount:** amount of the sample.
- **Size:** size of the sample.
- **Status:** status of the sample purification.
- **Results:** results link will be displayed here when the status is completed.
- **Edit:** use this link to edit the sample information if it is in progress. More details are given below.
- **View:** use this link to view the samples details including admin comments. More details are given below.
- **Cancel:** use it to cancel the sample status if it is “assigned”.
- **Back:** to go back to the Order Manager screen.

User will be able to view the results only if the order is completed and the admin has uploaded the results files (two files for each sample which comprises of a sequence file and chromatogram file). User can download the result files by clicking on the links.

On clicking the “Edit” link will open the following screen. The user can make the modifications to the required field and on hitting the “Save” button will save the changes made on the database.

Sample Name *	Sample3
Size(bp)	0
Concentration(ng/μl)	5.000
Purification Method	
Impurity Ratio	
Amount of Sample (μl) *	100.000
Sample Type *	PCR product
Primer Name *	Primer2
Services	Seq1
Primer Site	

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Fig N°2.4 – Edit Sample

VIEW

By clicking on the view link, opens a popup enables the user to view all the information of the sample, which also includes information added by the admin (Fig N°2.5).

Sample Information	
User Name : perrier	Order Date : 2009-03-04
Sample Name	Sample3
Size(bp)(bp)	0
Concentration(ng/μl)(ng/μl)	5.000
Purification Method	
Impurity Ratio	
Amount of Sample (μl)	100.000
Sample Type	PCR product
Primer Name	Primer2
Services	Seq1
Primer Site	
Plate	
Tube	
Order Status	Assigned
Dye- Terminator	
Sequence Text File	
Chromatogram File	
Comment	

Fig N°2.5 – Sample Information

The details added by the admin the sample information screen are as follows:

- **Plate:** the name of plate where the sample will be processed.
- **Tube:** the name of tube where the sample will be processed.
- **Dye-Terminator:** name of the dye-terminator used for the sequencing.
- **Sequence Text File:** the name of the sequence result file will be displayed if the admin has uploaded the sequence result file.
- **Chromatogram File:** the name of the chromatogram file will be displayed if the admin has uploaded the chromatogram result file.

User can download these result files by clicking on the names of the required result file displayed in the sample information screen.

2-2. Place order

To place an order, the user can access the 'Sequencing Service Order Form' by hovering over the 'Orders' menu, and selecting the 'Place Order' option which will display the following screen (fig N°2.6).

Sample Name *	Size (bp)	Concentration (ng/μl)	Purification Method	Impurity Ratio	Sample Type *	Amount of Sample (μl)	Primer Name *	Primer Site	Services	Comment
sample 1		10			PCR product	30	M13 Reverse		Seq1	Comment
sample 2	100				PCR product	20	M13 Reverse		Seq1	Comment
sample 3				10	PCR product	50	M13 Reverse		Seq1	Comment

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Fig N°2.6 – Sequencing service order form

The details of the fields on the Sequencing order form are as follows:

- **Sample name:** The name of the sample.
- **Size:** Sample size or length.
- **Concentration (ng/μl):** The concentration of the sample.
- **Purification method:** The name of the method used for purification.
- **Impurity ratio:** The impurity ratio for the sample.
- **Sample type:** The name of the sample type.
- **Amount of sample:** The amount of sample.
- **Primer name:** The name of the primer.

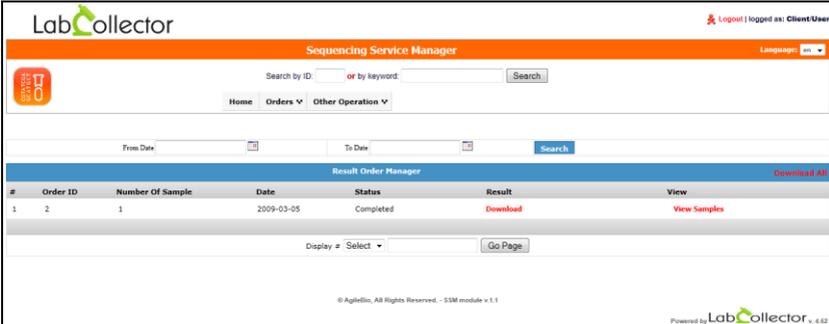
- **Primer site:** The primer site information.
- **Service type:** The name of the service type used for the individual sample.
- **Comment:** Comment if any.
- **Add:** This button is used to add rows in the form.
- **Remove:** This button is used to remove rows from the form. Only one line can be removed at a given instance.
- **Save:** By hitting on this button, data will go to server side and stores inside the database.

The 'sample name', 'sample type', 'amount of sample' and 'primer name' are the mandatory fields. Checkboxes are given with the sample type, primer name and service type, to set the selected value for other none selected values.

User can add any number of rows to add more than one sample for one order using 'Add' button. User can also remove the added rows from the order form. Default row in the form is one.

2-3. Result

To view the results of the completed orders, the user can access the 'Result Order Manager' by hovering over the 'Orders' menu, and selecting the 'Result' option which will display the following screen (fig N°2.7). Result order manager contains the list of all the completed orders with the results.



The screenshot shows the LabCollector Sequencing Service Manager interface. At the top, there is a search bar with options to search by ID or keyword. Below the search bar, there are navigation tabs for Home, Orders, and Other Operation. A table titled 'Result Order Manager' displays the following data:

#	Order ID	Number Of Sample	Date	Status	Result	View
1	2	1	2009-03-05	Completed	Download	View Samples

At the bottom of the table, there is a 'Display #' dropdown menu set to 'Select' and a 'Go Page' button. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.82'.

Fig N°2.7 – Results Order Manager

The Result screen displays the following details:

- **Order Id:** The auto incremented number for order id.
- **Number of Samples:** The number of samples in an individual order.

- **Date:** The date on which the order was submitted.
- **Status:** The status of the order.
- **Result:** Link provided under this column to download the result file in the zip format.
- **View:** View the sample details. Details are given below.
- **Search:** User can search according to date.
- **Download All:** User can download all the completed result in zip format through this link.

User can download all the result files of an individual order in a zip format by clicking on the '**Download**' link. The '**Download All**' option enables the user to download the result files of all the completed orders in zip format. User can also search the result of a particular date range.

VIEW

By clicking on the 'View samples' under 'view' column will display the 'Order Sample Manager' (fig N°2.3), similar to the 'Order Manager'; the only difference is, all the samples will be displayed with their result files (Sequence file and chromatogram file).

2-4. Primer

To add a new primer, the user can access the 'Add Primer' by hovering over the 'Other Operation' menu, and selecting the 'Primer' and then 'Add' option which will display the following screen (fig N°2.8).

The screenshot shows the 'Add Primer' form in the LabCollector Sequencing Service Manager. The form has the following fields and elements:

- Primer Name:** Input field containing 'Primer 1'.
- Primer Sequence:** Input field containing '3ACACTATAGAATAC'.
- Temperature ° C:** Input field containing '32'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom left.
- Navigation:** 'Home', 'Orders', and 'Other Operation' menu items.
- Search:** Search bar with 'Search by ID' or 'by keyword' options and a 'Search' button.
- Footer:** Copyright notice '© Agilent, All Rights Reserved - SSM module v1.1' and 'Powered by LabCollector v. 4.82'.

Fig N°2.8 – Add Primer

Add primer screen has the following fields:

- **Primer name:** The name of the primer.
- **Primer sequence:** The primer sequence.
- **Temperature:** The melting temperature of the primer.
- **Save:** Button provided to save the data.
- **Cancel:** Button provided to cancel the operation.

By hitting on the 'save' button the data will be stored in the database.

By hovering on the 'Other Operation' and 'Primer' and then selecting the 'View', user gets the 'Primer Manager' window and will be able to view the list of primers added by the user (Fig N°2.9).



The screenshot shows the LabCollector Sequencing Service Manager interface. At the top, there is a search bar with options to search by ID or keyword. Below the search bar, there are navigation tabs for Home, Orders, and Other Operation. The main content area displays a table titled 'Primer Manager' with the following data:

#	Primer Name	Primer Sequence	Temperature ° C	Size	Delete	Edit
1	Primer1	actgagtgcttagatga	59.000	19	✖	edit
2	Primer2	gcagcagtcaccattatgg	59.000	19	✖	edit
3	Primer 1	ATTAGGTGCACACTATAGAATAC	32.000	23	✖	edit

At the bottom of the table, there is a 'Display #' dropdown menu and a 'Go Page' button. The footer of the interface includes the copyright notice '© AgBio, All Rights Reserved. - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

Fig N°2.9 – Primer Manager

Primer manager displays the following fields:

- **Primer name:** The name of the primer.
- **Primer Sequence:** The sequence of the primer.
- **Temperature:** The melting temperature of the primer.
- **Size:** Size (length) of the primer sequence.
- **Delete:** Icon provided to delete the details of the primers.
- **Edit:** Link provided to edit the previous information of the primer. Details are given below.

EDIT

Clicking on the 'Edit' link displays the 'Edit Primer' screen (Fig N°2.10); the user can edit the previously added information of the primer from this screen. This screen displays the following details:

- **Primer Name:** The name of the primer.
- **Primer sequence:** The name of the primer sequence.
- **Temperature:** The melting temperature of the primer.
- **Save:** To save the changes.
- **Cancel** – To cancel the operation

2

The screenshot shows the 'Edit Primer' form in the LabCollector Sequencing Service Manager. The form is titled 'Edit Primer' and contains the following fields:

Primer Name	Primer1
Primer Sequence	actgcagctgcttagaatga
Temperature ° C	59.00

At the bottom of the form, there are two buttons: 'Save' and 'Cancel'. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved - SSM module v 1.1' and the text 'Powered by LabCollector v 4.02'.

Fig N°2.10 – Edit Primer

By hitting on the 'save' button the user can update the data with the modifications. The user can cancel the task by clicking on the 'cancel' button.

3- ADMIN

After logging into the application with the 'admin' credentials, the application will display the following home page (Fig N°3.1).

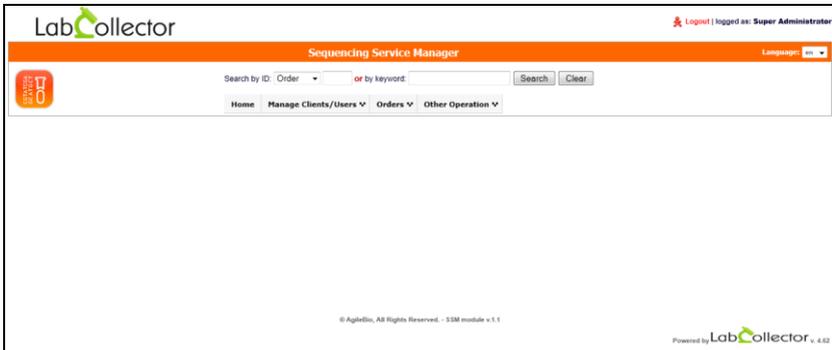


Fig N°3.1 – Admin Home Page

The admin can perform the following operations:

- **Application**
 - User Management
- **Order operation**
 - View Order status
 - Current
 - Archived
 - Result
- **Other Operation**
 - Primer
 - Standard Services
 - Sample Type
 - Plates
 - Tubes
 - Naming Convention
 - Setup

Admin can assign the plate/tube to the samples. The admin will be able to upload the result file for the individual sample when they are completed. There are two result files one is sequence file and another is chromatogram file.

3-1. User management

To view all the users, the admin can access the 'User Manager' by hovering over the 'Manage clients/users' menu, select the 'User Management' option and then select the 'View User' option which will display the following screen (Fig N°3.2).

The screenshot displays the 'User Manager' interface within the 'Sequencing Service Manager' application. The interface includes a search bar at the top, navigation tabs, and a table of users. The table has the following data:

#	Username	Type	Enabled	Edit	Delete
1	somuser	User	✓	Edit	✕
2	beranger	User	✓	Edit	✕
3	perrier	User	✓	Edit	✕
4	pierre	User	✓	Edit	✕
5	pierre2	User	✓	Edit	✕
6	hu_ybq	User	✓	Edit	✕
7	claire	User	✓	Edit	✕

Fig N°3.2 – User Manager

The screen displays the following details

- **Username:** The identification of the user account.
- **Type:** The type of the user account.
- **Enabled:** An icon is provided in this column to enable or disable the user account; only enabled users will be permitted to login to the application.
- **Edit:** A link is provided to edit the previous information, refer below for the details.

EDIT

By clicking on the 'Edit' link the application will display the 'Edit User' screen. This screen facilitates the admin in modifying the previously added user information.

The screenshot shows the 'Edit User' form in the LabCollector Sequencing Service Manager. The form is divided into two columns. The left column contains fields for Name (demo), E-mail (contact@aglebio.com), Username (ssmuser), Password, Confirm Password, Address (test), and Delivery Address. The right column contains fields for Billing Address, Profession, Designation, Institution, Phone, Mobile, Fax, User Type (User), and User Block (radio buttons for Yes and No). At the bottom of the form are 'Save User' and 'Cancel' buttons. The page header includes 'LabCollector', 'Sequencing Service Manager', and 'Language: en'. The footer includes '© AgileBio, All Rights Reserved. - SSM module v 1.1' and 'Powered by LabCollector v. 4.02'.

3

Fig N°3.3 – Edit User

'Edit User' screen display following fields:

- **Name:** The name of the user.
- **E-mail:** The email address of the user.
- **Username:** Account name of user.
- **Password:** Password of the user.
- **Confirm Password:** Confirmation of the password.
- **Address:** The address of the user.
- **Delivery Address:** The delivery address of the user.
- **Billing Address:** The billing address of the user.
- **Profession:** User's profession.
- **Institution:** The name of the institution.
- **Phone:** Phone number of the user.
- **Mobile:** Mobile number of the user.
- **Fax:** Fax number of the user.
- **User Type:** The type of the user (Admin/User).
- **User Block:** Options provided for blocking a user. By default the status of a user is not blocked.
- **Save User:** Button provided to store the modified data into the database.
- **Cancel:** Button provided to discard the changes done.

By hitting on the 'Save User' button modifications done to the user details will be stored in the database.

To add a new user, the admin can access the 'Add User' by hovering over the 'Application' menu, select the 'User management' option and selecting the option 'Add User' will display the following screen (Fig N°3.4).

The screenshot shows the 'Add User' form in the LabCollector Sequencing Service Manager. The form is organized into several sections:

- Name ***: Input field containing 'agilebio'.
- E-mail ***: Input field containing 'sales@agilebio.com'.
- Username ***: Input field containing 'claire'.
- Password ***: Input field with masked characters '*****'.
- Confirm Password ***: Input field with masked characters '*****'.
- Address ***: Input field containing 'PARIS'.
- Delivery Address**: Input field.
- Billing Address**: Input field.
- Profession**: Input field.
- Designation**: Input field.
- Institution**: Input field.
- Phone**: Input field.
- Mobile**: Input field.
- Fax**: Input field.
- User Type ***: Dropdown menu with 'User' selected.

At the bottom of the form are 'Save User' and 'Cancel' buttons. The footer of the page includes '© AgileBio, All Rights Reserved - SSM module v-1.1' and 'Powered by LabCollector v. 4.32'.

Fig N°3.4 – Add User

The following information will be entered in the 'Add User' screen. Certain fields are mandatory and they are marked by red asterisk (*).

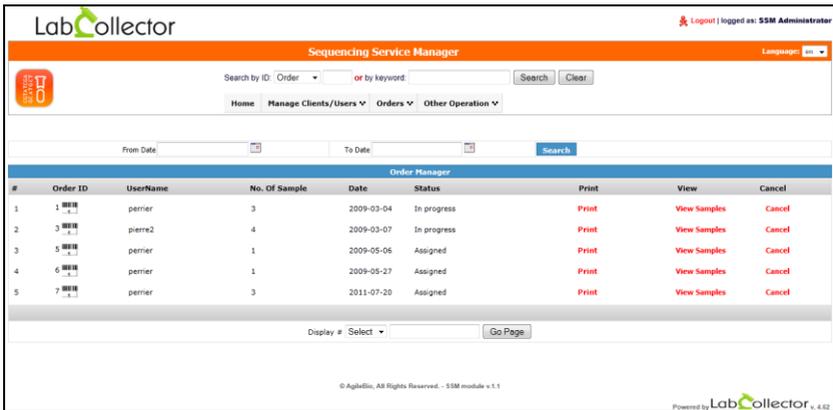
- **Name:** The name of the user.
- **E-mail:** The email address of the user.
- **Username:** Account name of user.
- **Password:** Password of the user.
- **Confirm Password:** Confirmation of the password.
- **Address:** The address of the user.
- **Delivery Address:** The delivery address of the user.
- **Billing Address:** The billing address of the user.
- **Profession:** User's profession.
- **Institution:** The name of the institution.
- **Phone:** Phone number of the user.
- **Mobile:** Mobile number of the user.
- **Fax:** Fax number of the user.
- **User Type:** The type of the user (Admin/User).
- **User Block:** Options provided for blocking a user. By default the status of a user is not blocked.
- **Save User:** Button provided to store the modified data into the database.

- **Cancel:** Button provided to discard the changes done.

Hitting the 'Save User' button will save the data into the database.

3-2. View order status (current)

To view the current order status , the admin can access the 'Orders' menu, then 'View Order Status' and on selecting the 'Current' option which will display the following screen (Fig N°3.5).



The screenshot shows the 'Order Manager' interface. At the top, there is a search bar with 'Search by ID: Order' and 'or by keyword' options. Below the search bar are navigation tabs: 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. A table titled 'Order Manager' displays the following data:

#	Order ID	UserName	No. Of Sample	Date	Status	Print	View	Cancel
1	1	perrier	3	2009-03-04	In progress	Print	View Samples	Cancel
2	3	pierre2	4	2009-03-07	In progress	Print	View Samples	Cancel
3	5	perrier	1	2009-05-06	Assigned	Print	View Samples	Cancel
4	6	perrier	1	2009-05-27	Assigned	Print	View Samples	Cancel
5	7	perrier	3	2011-07-20	Assigned	Print	View Samples	Cancel

At the bottom of the table, there is a 'Display #' dropdown menu and a 'Go Page' button. The footer of the page includes the copyright notice '© AgBioBio, All Rights Reserved. - SSM module v.1.1' and the 'Powered by LabCollector v. 2.02' logo.

Fig N°3.5 – Order Manager

This screen will display the following information:

- **Order Id:** The order ID number, it is auto incremented. You can also print a barcode corresponding to the order ID by clicking on the barcode icon.
- **User Name:** The name of user who submitted the order.
- **Number of samples:** The number samples inside the order.
- **Order date:** Date on which the order was submitted.
- **Print:** This is used to print the sample details with plate/tube and well information of an individual order. Refer below for the details.
- **View:** To view the details of samples, Refer below for the details.
- **Cancel:** Button provided for canceling the order. This is functional only if the order status is assigned.

PRINT

By clicking on the 'Print' link will display a screen which contains the sample details with plate/tube and well information of an individual order (Fig N°3.6). This screen has the following details:

- **User Name:** The name of the user who has placed the particular order.
- **Order ID:** Order ID.
- **Order Date:** The date on which the order was submitted.
- **Phone No:** The phone number.
- **Sample Name:** The name of the sample.
- **Sample Type:** The sample type name.
- **Primer Name:** The primer name.
- **Amount:** The amount of the sample.
- **Service name:** The name of the service for a particular sample.
- **Tube /Plate:** The name of plate or tube.
- **Well:** The well position, if the plate is used.
- **Status:** Status of the sample.
- **Print:** Print button provided to print the details present on the screen.

Sequencing Service Manager								
Details								
User Name : perrier					Order Date :2009-03-04			
Order-ID : 1					Phone No:			
#	Sample Name	Sample Type	Primer Name	Amount	Service Name	Tube/Plate	Well	Status
1	Sample1	PCR product	Primer1	100.000		Tube_1		Completed
2	Sample2	PCR product	Primer1	100.000	Seq2	Plate1	B3	Completed
3	Sample3	PCR product	Primer2	100.000	Seq1			Assigned
<input type="button" value="Print"/>								

Fig N°3.6 – Print page

VIEW

By clicking on the 'View Samples' link under 'View' column the application will display the 'Order Sample manager' screen, from this screen the admin will be able to view the list of the samples as well as the details of the sample(s) of an individual order (Fig N°3.7).

3

The screenshot shows the 'Order Sample Manager' interface. At the top, there is a search bar with 'Search by ID: Order' and 'or by keyword'. Below the search bar are navigation tabs: 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The main content area displays a table with the following data:

#	Sample ID	Order ID	Sample Name	Sample Type	Primer Name	Amount	Tube/Plate	Well	Status	Result	View	Edit	Cancel
1		1	Sample1	PCR product	Primer1	100.000	Tube_1		Completed	Seq ABI	View	Edit	Cancel
2		1	Sample2	PCR product	Primer1	100.000	Plate1	B3	Completed	Seq	View	Edit	Cancel
3		1	Sample3	PCR product	Primer2	100.000			Assigned		View	Edit	Cancel

At the bottom of the table, there is a 'Display #' dropdown menu set to 'Select' and a 'Go Page' button. The footer of the interface includes the copyright notice '© Agilent, All Rights Reserved - SSM module v.1.1' and the 'Powered by LabCollector v. 4.02' logo.

Fig N°3.7 – Order Sample Manager

The screen will display the following details of the sample:

- **Sample ID:** a sample ID is a system identification number generated for each sample. You can print a barcode corresponding to sample ID by clicking on the barcode icon.
- **Order ID:** an order ID is a system identification number generated for each individual order. You can also print a barcode corresponding to Order ID by clicking on the barcode icon.
- **Sample name:** name of the samples in the order.
- **Sample type:** type of the sample like PCR-product, BAC ...
- **Primer name:** name of the primer sequence.
- **Amount:** amount of the sample.
- **Tube/Plate:** name of tube or plate.
- **Well:** the well position if well is selected.
- **Status:** the status of the sample.
- **Results:** results link will be displayed here when the status is completed.
- **Edit:** use this link to edit the sample information if it is in progress. More details are given below.
- **View:** use this link to view the samples details including admin comments. More details are given below.

- **Cancel:** use it to cancel the sample status if it is “assigned”.
- **Back:** to go back to the Order Manager screen.

By clicking on the ‘Edit’ link admin will be able to get the ‘Sequencing Service Order Form’ for an individual sample (Fig N°3.8).

The screenshot displays the 'Sequencing Service Manager' interface. At the top, there is a navigation bar with 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. Below this is a search bar with 'Search by ID: Order' and 'or by keyword'. The main content area is titled 'Sequencing Service Order Form' and is divided into two columns: 'Details Provided by User' and 'Admin'. The 'Details Provided by User' column contains fields for Sample Name (Sample1), Size (bp) (0), Concentration (ng/µl) (5.000), Purification Method, Impurity Ratio, Amount of Sample (µl) (100.000), Sample Type (PCR product), Primer Name (Primer1), Primer Site, and Services (Select). The 'Admin' column contains fields for Plate (Select), Tube (0.2 mL), Order Status (Completed), Dye-Terminator, Sequence Text File (with a 'Parcourir...' button), Chromatogram File (with a 'Parcourir...' button), and a Comment field. At the bottom of the form are 'Save' and 'Cancel' buttons. The footer includes '© Agilent, All Rights Reserved - SSM module v.1.1' and 'Powered by LabCollector v. 4.32'.

Fig N°3.8 – Edit Order

The admin can fill the following information for the sample:

- **Plate:** select Plate type, Plate name and well position for the sample.
- **Assign:** link is provided to assign the well to the sample, refer below for details.
- **Tube:** tube name for the sample.
- **Order Status:** admin will be able to change the order status.
- **Dye-Terminator:** dye- terminator provided by the admin.
- **Sequence Text file:** to upload sequence result file if result generated.
- **Chromatogram file:** to upload chromatogram if result generated.
- **Comment:** to put some comment.
- **Save:** to save the modification.
- **Cancel:** to discard the changes.

By hitting on the save button admin can save the changes to the data base. If result files have been uploaded, the status of the sample will be changed to completed.

By clicking on the 'Assign' link provided in the 'Sequencing Service Order Form' application provides the following screen (Fig N°3.9).

	1	2	3	4	5	6	7	8	9	10	11	12
A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H	<input checked="" type="checkbox"/>	<input type="checkbox"/>										

Edit

Fig N°3.9 – Well in the plate

This screen displays the entire well inside the plate. By clicking on the 'edit' button admin will get following screen (Fig N°3.10).

	1	2	3	4	5	6	7	8	9	10	11	12
A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H	<input checked="" type="checkbox"/>	<input type="checkbox"/>										

Save

Fig N°3.10 – Assign well of Plate

The admin can assign the well, by selecting the check box. Hitting the save button the well will be assign to the sample.

By clicking on the 'view' link, the admin will be able to view the details of the sample (Fig N°3.11).

Sample Information			
User Name : perrier		Order Date :2009-03-04	
Sample Name	Sample3	Primer Site	
Size(bp)(bp)	0	Plate	
Concentration(ng/μl) (ng/μl)	5.000	Tube	
Purification Method		Order Status	Assigned
Impurity Ratio		Dye- Terminator	
Amount of Sample (μl)	100.000	Sequence Text File	
Sample Type	PCR product	Chromatogram File	
Primer Name	Primer2	Comment	
Services	Seq1		

Fig N°3.11 – Sample information

Admin will be able to view all the information associated with a sample. Following are the information added by the admin:

- **Plate:** the name of the plate.
- **Tube:** the name of the tube.
- **Order Status:** the order status.
- **Dye terminator:** the name of the dye terminator.
- **Sequence Text file:** the name of the sequence result file.
- **Chromatogram file:** the name of the chromatogram file.
- **Comment:** comment.

3-3. View order status (archived)

The orders which are older than 6 month and have the status as 'completed' will be archived. To view the archived order, the user can access the 'Order Manager' by hovering over the 'Orders' menu, select the 'View Order Status' option and on selecting the 'Archived' option will display the following screen (Fig N°3.12).

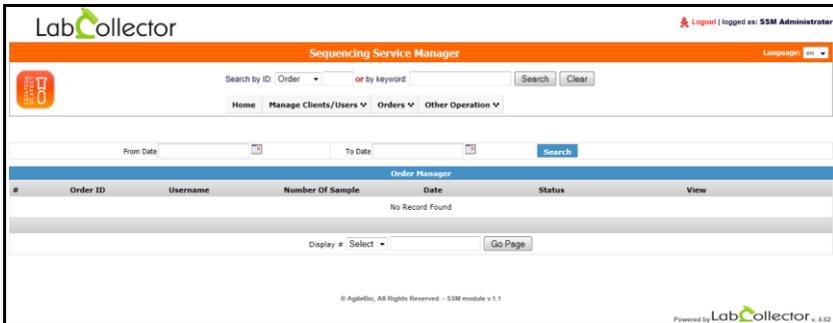


Fig N°3.12 – Archived Order

This screen has the following fields:

- **Order ID:** the id of an order, it is an auto incremented number.
- **User Name:** the name of the user who has submitted the order.
- **Number of Samples:** the total number of samples inside the order.
- **Date:** the date on which the order was submitted.
- **Status:** the status of the order.
- **View:** by clicking on the link under this column, admin will be able to navigate to the 'Order Sample Manager' for the details of the samples.
- **Search:** to search for an order belonging to a specific date range.

Whenever the screen opens up for the first time, it will display 'No Record Found', when the user selects the required date range and clicks on the search button, all the completed order of the given date range will be displayed. If the user does not enter the 'To Date', by default the application will search for all the archived order from the 'From Date' provided by the user till the current date.

3-4. Result

To view the results, the admin can access the 'Result Order Manager' by hovering over the 'Orders' menu, and on selecting the 'Result' option will display the following screen (Fig N°3.13). All the completed result will be listed in this screen.

Result Order Manager								
#	Order ID	UserName	Number of Sample	Date	Status	Completed By	Result	View
1	9	demo123	3	2009-01-14	Completed	sadmin	Download	View Samples

Display #

Fig n°3.13 – Result Manager

3

This screen displays the following information:

- **Order-ID:** an auto incremented id for order numbering.
- **User name:** the name of user who has placed the order.
- **Number of Samples:** the total number of samples in an individual order.
- **Date:** the date on which the order was submitted.
- **Status:** the status of the order.
- **Completed By:** the name of admin who has completed the order.
- **Result:** by clicking on the link 'Download' in the result column, the admin can download the result in zip format.
- **View:** to view the details of the samples of an individual order.

Admin can download all the result file of an individual order in zip format; by clicking on the 'Download' link under the 'Result' column.

VIEW

By clicking on 'View Samples' link under the 'View' column, the admin user can navigate to the 'Order Sample Manager' (Fig N°3.14) of an individual order; The admin can view the list of samples as well as the details of the sample(s) which includes the result files of an individual sample. The admin can also download the result files of an individual sample.

Order Sample Manager										
#	Order ID	Sample Name	Sample Type	Primer Name	Amount	Tube/Plate	Well	Status	Result	View
1	1	test	Phage	M13/pUC Forward	11.000	plate	P4	Completed	File1 File2	View

Display #

Fig N°3.14 – Order Sample Manager

3-5. Primer

To add the generic primer, the admin can access the 'Add Primer' by hovering over the 'Other Operation' menu, select the 'Primer' option and on selecting the 'Add' option will display the following screen (Fig N°3.15). These generic primers will be visible to all the users.

3

The screenshot shows the 'Add Primer' form in the LabCollector Sequencing Service Manager. The form has a blue header with the LabCollector logo and 'Sequencing Service Manager' text. Below the header is a search bar with 'Search by ID' and 'or by keyword' options, and a 'Search' button. A navigation menu includes 'Home', 'Orders', and 'Other Operation'. The main form area is titled 'Add Primer' and contains three input fields: 'Primer Name' (with the value 'Primer 1'), 'Primer Sequence' (with the value '3ACACTATAGAATAC'), and 'Temperature o C' (with the value '32'). At the bottom of the form are 'Save' and 'Cancel' buttons. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved. - SIM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

Fig N°3.15 – Add Primer

The details to be filled in the “Add Primer” screen are as follows:

- **Primer name:** The name of the primer.
- **Primer sequence:** The primer sequence.
- **Temperature:** The melting temperature of the primer.
- **Save:** Button provided to save the data.
- **Cancel:** Button provided to cancel the operation.

By hitting on the 'Save' button the admin can save the generic primer information in the database. Duplicate generic primers cannot be added.

To view the generic primer, the admin can access the 'Primer Manager' by hovering over the 'Other Operation' menu, select the 'Primer' option and on selecting the 'View' option will display the following screen (Fig N°3.16). This screen displays the list of generic primers added by admin.



The screenshot shows the 'Sequencing Service Manager' interface. At the top, there is a search bar with 'Search by ID' and 'or by keyword' options, and a 'Search' button. Below the search bar are navigation tabs: 'Home', 'Orders', and 'Other Operation'. The main content area is titled 'Primer Manager' and contains a table with the following data:

#	Primer Name	Primer Sequence	Temperature o C	Size	Delete	Edit
1	Primer1	actgcagctggtgaatga	59.000	19		Edit
2	Primer2	gagcgatgacattatgga	59.000	19		Edit
3	Primer 1	ATTAGGTGACACTATAGAATAC	32.000	23		Edit

At the bottom of the table, there is a 'Display # Select' dropdown and a 'Go Page' button. The footer includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the 'Powered by LabCollector v. 4.02' logo.

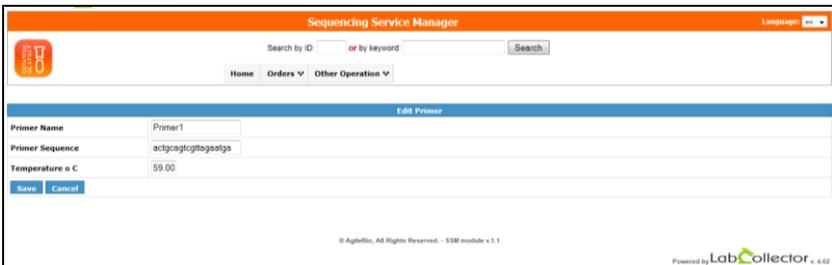
Fig N°3.16 – Primer Manager

Primer Manager displays following details of generic primers:

- **Primer name:** The name of the primer.
- **Primer Sequence:** The sequence of the primer.
- **Temperature:** The melting temperature of the primer.
- **Size:** Size (length) of the primer sequence.
- **Delete:** Icon provided to delete the details of the primers.
- **Edit:** Link provided to edit the previous information of the primer. Details are given below.

EDIT

By clicking on the edit link admin will go to the 'Edit Primer' screen (Fig N°3.17).



The screenshot shows the 'Sequencing Service Manager' interface with the 'Edit Primer' form. The form contains the following fields:

Primer Name	Primer1
Primer Sequence	actgcagctggtgaatga
Temperature o C	59.00

At the bottom of the form, there are 'Save' and 'Cancel' buttons. The footer includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the 'Powered by LabCollector v. 4.02' logo.

Fig N°3.17 – Edit Primer

The screen displays the following details:

- **Primer name:** The name of the primer.
- **Primer sequence:** The primer sequence.

- **Temperature:** The melting temperature of the primer.
- **Save:** Button provided to save the data.
- **Cancel:** Button provided to cancel the operation.

3-6. Standard services

To add a standard service, the admin can access the 'Add Standard Service' by hovering over the 'Other Operation' menu, select the 'Standard Services' option and on selecting the 'Add' option will display the following screen (Fig N°3.18). These services will be visible to all the users.

The screenshot shows the 'Sequencing Service Manager' interface. At the top, there is a search bar with 'Search by ID: Order' and 'or by keyword' options, along with 'Search' and 'Clear' buttons. Below the search bar is a navigation menu with 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The 'Add Standard Services' form is displayed, featuring input fields for 'Service Code', 'Service Type', 'Price', and 'Description'. The 'Description' field contains the text '150'. At the bottom of the form are 'Save' and 'Cancel' buttons. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the 'Powered by LabCollector v. 4.02' logo.

Fig N°3.18 – Add standard services

This screen displays the following fields:

- **Service Code:** the name of the service code.
- **Service Type:** the type of service.
- **Price:** the price of the service.
- **Description:** the description of the service.
- **Save:** button provided to save the service.
- **Cancel:** button provided to cancel the operation.

By hitting on the 'save' button, the admin can save the details of the service to the database.

To **view** the standard services, the admin can access the 'Service Manager' by hovering over the 'Other Operation' menu, select the 'Standard Services' option and on selecting the 'View' option will display the following screen (Fig N°3.19). This screen displays the list of services added by the admin.

LabCollector Sequencing Service Manager

Search by ID: Order or by keyword: Search Clear

Home Manage Clients/Users Orders Other Operation

#	Service Name	Service Type	Service Price	Delete	Edit
1	Seq1	PCR product Sequencing	35.00	✘	Edit
2	Seq2	24h PCR Product sequencing	50.00	✘	Edit

Display # Select Go Page

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3

Fig N°3.19 – Service Manager

The screen displays the following details:

- **Service name:** the name of the standard service.
- **Service type:** the name of the service type.
- **Service price:** the price of the standard service.
- **Delete:** icon to remove the individual service detail from the list.
- **Edit:** link provided to edit the previous information of service detail is given below.

EDIT

By clicking on the 'Edit' link the admin will be able to navigate to the 'Edit Standard Service' (Fig N° 3.20).

LabCollector Sequencing Service Manager

Search by ID: Order or by keyword: Search Clear

Home Manage Clients/Users Orders Other Operation

Edit Standard Services

Service Code: Seq1

Service Type: PCR product Sequenc

Price: 35.00

Description: standard quality sequencing on PCR BE30885

150

Save Cancel

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Fig N°3.20 – Edit Service

Admin can make changes to the previous information of the standard service. By hitting on the 'Save' button modifications will be stored in the database.

3-7. Sample type

To add the sample type, the admin can access the 'Add Sample Type' by hovering over the 'Other Operation' menu, select the option 'Sample type' and on selecting the 'Add' option will display the following screen (Fig N°3.21). These sample types will be visible to all the users

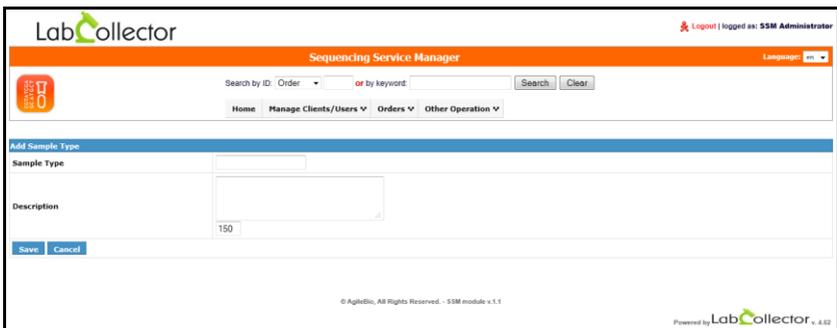
The screenshot shows the 'Add Sample Type' form in the LabCollector Sequencing Service Manager. The page has an orange header with the LabCollector logo and 'Sequencing Service Manager' text. A navigation menu includes 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The form itself has a blue header 'Add Sample Type' and contains two input fields: 'Sample Type' and 'Description'. Below the 'Description' field is a character count '150'. At the bottom of the form are 'Save' and 'Cancel' buttons. The footer contains copyright information and the version 'v. 4.02'.

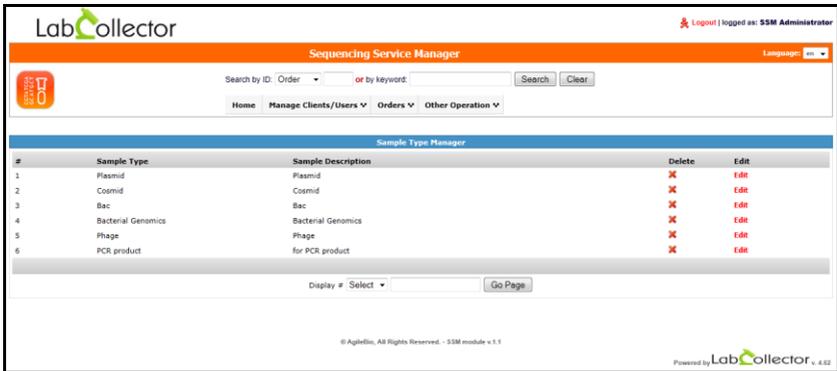
Fig 3.21 – Add Sample Type

This screen display following information:

- **Sample Type:** the name of the sample type.
- **Sample Description:** the description of the Sample type.
- **Save:** button provided to save the information.
- **Cancel:** button provided to cancel the operation.

By hitting on the 'save' button, the admin can save the information to the database.

To view the sample type, the admin can access the 'Sample Type Manager' by hovering over the 'Other Operation' menu, select the 'Sample Type' option and on selecting the 'View' option will display the following screen (Fig N°2.22). This screen displays the list of Sample type added by admin.



The screenshot shows the LabCollector Sequencing Service Manager interface. At the top, there is a search bar with options to search by ID (Order) or by keyword. Below the search bar are navigation tabs: Home, Manage Clients/Users, Orders, and Other Operation. The main content area is titled 'Sample Type Manager' and contains a table with the following data:

#	Sample Type	Sample Description	Delete	Edit
1	Plasmid	Plasmid	✖	Edit
2	Cosmid	Cosmid	✖	Edit
3	Bac	Bac	✖	Edit
4	Bacterial Genomics	Bacterial Genomics	✖	Edit
5	Phage	Phage	✖	Edit
6	PCR product	for PCR product	✖	Edit

At the bottom of the table, there is a 'Display # Select' dropdown and a 'Go Page' button. The footer includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

3

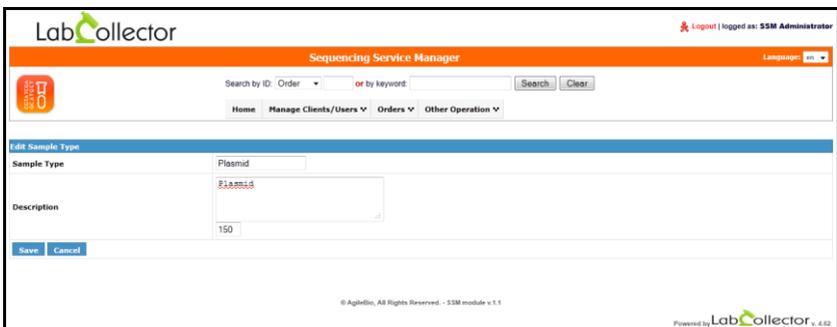
Fig N°2.22 – Sample Type Manager

The screen displays the following details:

- **Sample Type:** the name of the sample.
- **Sample Description:** the description of the sample.
- **Delete:** icon provided to delete the individual sample type information from the list.
- **Edit:** link provided to modify the previously added information of the individual service, refer below for the details.

EDIT

By clicking on 'Edit' link admin will able to go 'Edit Sample Type' (Fig N°3.23).



The screenshot shows the 'Edit Sample Type' form in the LabCollector Sequencing Service Manager. The form has the following fields:

- Sample Type:** A text input field containing 'Plasmid'.
- Description:** A text area containing '3,888888'.
- Length:** A text input field containing '150'.

At the bottom of the form, there are 'Save' and 'Cancel' buttons. The footer includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

Fig N°3.23 – Edit Sample Type

Admin can make the modifications and on hitting the 'save' button can save the modifications to the database.

3-8. Plate

To create plate, the admin can access the 'Add Plate' by hovering over the 'Other Operation' menu, select the option 'Plate' and on selecting the 'Create' option will display the following screen (Fig N°3.24). These plates will be visible to all the admin.

3



The screenshot shows the 'Add Plate' form in the LabCollector Sequencing Service Manager. The page header includes the LabCollector logo, a 'Logout' button, and the user 'SSM Administrator'. The main navigation bar contains 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. A search bar is present with options to search by ID or keyword. The 'Add Plate' form has two input fields: 'Plate Name' and 'Plate Type' (a dropdown menu). Below the form are 'Save' and 'Cancel' buttons. The footer contains copyright information and the text 'Powered by LabCollector v. 4.02'.

Fig N°3.24 – Create plate

The screen displays the following details:

- **Plate Name:** the name of the plate.
- **Plate Type:** the type of the plate, admin can select the type from the drop down list.
- **Save:** button is provided to save the information.
- **Cancel:** button is provided to cancel the information.

Hitting on the 'save' button the information will be store in the database.

To create new plate types, the admin can access the "Add Types Plate" by hovering over the "Other Operation" menu; select the option "Plate" and on selecting the "Add types plate" option will display the following screen (Fig N°3.25).

LabCollector Sequencing Service Manager

Search by ID: Order or by keyword: [Search] [Clear]

Home Manage Clients/Users Orders Other Operation

Add Plate Type

Plate Type: 70 Make default

Number Of Rows: 7

Number Of Columns: 10

[Save] [Cancel]

Plate Type (# of wells)	Number Of Rows	Number Of Columns
-> 96	8	12
150	10	15

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Fig N°3.25 – Add Plate Types

The screen displays the following details:

- **Plate Type:** the type of the plate you want to create (96, 24, 384 ...)
- **Make default:** you can check this box if you want to define your plate type as default plate.
- **Number of Rows**
- **Number of columns**
- **Save:** button is provided to save the information.
- **Cancel:** button is provided to cancel the information.
- **Available plate types:** all plate types that you created.

To view the plates, the admin can access the 'Plate Manager' by hovering over the 'Other Operation' menu, select the 'Plate' option and on selecting the 'View' option will display the following screen (Fig N°3.26). This screen displays the list of plate added by admin.

Plate Manager										
#	Plate ID	Plate Name	Type	Order ID	Plate Full Status	Sample Position	Print	Delete	Edit	Upload
1	2	Plate	96	3	No	View	Print	X	Edit	Upload Download Association
2	3	tplate	96	4	No	View	Print	X	Edit	Upload Download Association
3	4	plates	96	5	No	View	Print	X	Edit	Upload Download Association
4	5	platetest	96	6, 8	No	View	Print	X	Edit	Upload Download Association
5	6	Plate 96 test4	96	7	No	View	Print	X	Edit	Upload Download Association

Display # [Select] [Go Page]

Fig N°3.26 – Plate Manager

The screen displays the following details:

- **Plate id:** the unique identification number provided by the system. A link is provided with the 'Plate Id', admin can sort the list of the plate by clicking on the link. You can also print a barcode to identify your plate.
- **Plate Name:** the name of the plate.
- **Type:** the type of the plate.
- **Order ID:** the order ids associated with the plate.
- **Plate Full Status:** the status of the plate either it is full or not.
- **Sample position:** application provides a link under this column to view the order/sample position in the plate, refer below for details.
- **Print:** this is used to print the sample details with plate/tube and well information of an individual plate. Refer below for the details.
- **Delete:** icon is provides to delete the plate from list if no order is associated with the plate.
- **Edit:** link is provided to modify the plate information if no order is associated with the plate.
- **Upload:** an 'Upload' link is provided under 'Upload' column to upload a zip file of the results against the plate.
- **Download:** link is provided to download the uploaded zip file.
- **Association:** a link is provided to associate the result files present in the uploaded zip, with the sample present in the plate. Refer below for detail.

By clicking on the 'View' link provided under the 'View' column, the application provides the following screen (Fig N°3.27).

	1	2	3	4	5	6	7	8	9	10	11	12
A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	perrier:1:Sample2		<input type="checkbox"/>							
D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fig N°3.27 – Well with sample information

In this screen admin will be able to view all the wells of the plate with the information whether they are filled or not. By hovering over any block of the well, the admin will be able to see the user name, order id and sample name separated by a colon (:).

By clicking on the 'Print' link provided under the column 'Print', the application provides a following screen (Fig N°3.28).

3

Sequencing Service Manager										
Details										
Plate Name : Plate1								Plate Type :96		
Plate ID: 1										
#	User Name	Order ID	Order Date	Sample Name	Sample Type	Primer Name	Amount	Service Name	Well	Status
1	perrier	1	2009-03-04	Sample2	PCR product	Primer1	100.000	Seq2	B3	Completed
2	pierre2	3	2009-03-07	sample a	Plasmid	M13 Forward (-29)	10.000	Seq1	A1	Completed
3	pierre2	3	2009-03-07	sample b	Plasmid	T3 Promoter	10.000	Seq1	B1	In progress
4	pierre2	3	2009-03-07	sample c	Plasmid	T7 Promoter	10.000	Seq1	C1	In progress
5	pierre2	3	2009-03-07	sample d	Plasmid	SP6 Promoter	10.000	Seq1	D1	In progress

Fig N°3.28 – Print details

This screen contains the sample details with plate/tube and well information of an individual plate. By clicking on the print button the admin will be able to print the information present on the screen.

By clicking on the 'Association' link, application provides following screen (Fig N°3.29).

This screen facilitates the admin to associate the result files with the respective sample and the order id.

Sample Result Files Association Manager [Please ensure the file name will be identical]			
Order ID	Sample Name	Sequence File Name	Chromatogram File Name
Select ▼	<input type="text"/>	Seq1.seq	Seq1.AB1
Select ▼	<input type="text"/>	Seq2.seq	Seq2.AB1
Select ▼	<input type="text"/>	Seq3.seq	Seq3.AB1
Select ▼	<input type="text"/>	Seq4.seq	Seq4.AB1

Fig N° 3.29 – Association

This screen displays following information:

- **Order ID:** admin can select the order id from the drop down.
- **Sample name:** admin can select the sample name from the drop down list.
- **Sequences file Name:** the list of the name of the sequence files present inside the zip uploaded by the admin.
- **Chromatogram File Name:** the list of the name of the chromatogram files present inside the zip uploaded by the admin.

Admin can select the order id and sample name against the files. Hitting on the 'save' button the information will store in the database. If both the files (sequence and chromatogram) has been uploaded from this screen the 'status' of the sample will be changed.

3-9. Tube

To define the tube type, the admin can access the "Add Type" by hovering over the "Other Operation" menu, select the "Tubes" option and on selecting "Add type" option will display the following screen (Fig N°3.30).

The screenshot shows the 'LabCollector Sequencing Service Manager' interface. At the top, there is a search bar with 'Search by ID: Order' and 'or by keyword' options, along with 'Search' and 'Clear' buttons. Below the search bar is a navigation menu with 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The 'Add Tube Type' form is visible, featuring a 'Tube Type' input field, a 'Make default' checkbox, and 'Save' and 'Cancel' buttons. To the right, the 'Available Tube Types' section displays a list with one entry: '0.2 mL'. The footer of the interface includes the copyright notice '© Agilent, All Rights Reserved - SSM module v.1.1' and the 'Powered by LabCollector v. 3.00' logo.

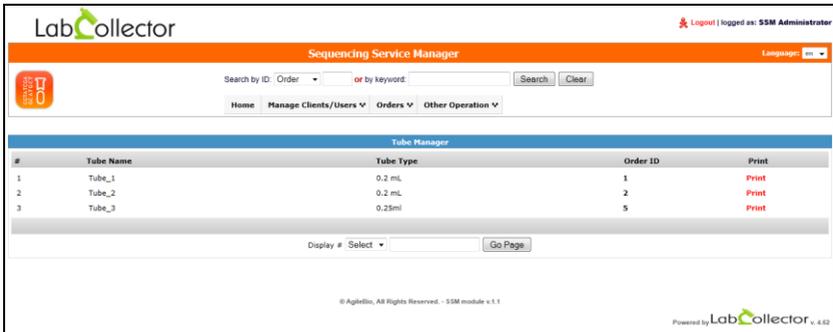
Fig N°3.30 – Add Tube Type

This screen displays the following information:

- **Tube Type:** the type of the tube (volume). If you check the make default box you can define your type as default model.
- **Available tube type:** displays the tube types that the admin created.
- **Save:** button provided to save the information.
- **Cancel:** button provided to cancel the operation.

By hitting on 'save' button admin can save the information to the database.

To view the tubes, the admin can access the 'Tube Manager' by hovering over the 'Other Operation' menu, select the 'Tubes' option and on selecting the 'View' option will display the following screen (Fig N°3.31). This screen displays the list of the tube added by the admin.



The screenshot shows the 'Tube Manager' interface in the LabCollector Sequencing Service Manager. The page has a search bar at the top with options to search by ID or keyword. Below the search bar is a navigation menu with 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The 'Other Operation' menu is expanded to show 'Tubes'. The main content area displays a table of tubes with the following data:

#	Tube Name	Tube Type	Order ID	Print
1	Tube_1	0.2 ml.	1	Print
2	Tube_2	0.2 ml.	2	Print
3	Tube_3	0.25ml	5	Print

At the bottom of the table, there is a 'Display #' dropdown menu and a 'Go Page' button. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved - SSM module v.1.1' and the LabCollector logo.

Fig N°3.31 – Tube Manager

The screen displays the following details:

- **Tube Name:** the name of the tube. Automatically generated when you define a tube type.
- **Tube Type:** the description of the tube.
- **Order ID:** the id of the order associated with the individual tube.
- **Print:** this is used to print the sample details with the tube information. Refer below for the details.

PRINT

By clicking on the 'Print' link the application displays the following screen (Fig N°3.32).

Sequencing Service Manager									
Details									
Tube Name: Tube_1							Tube Type :0.2 mL		
Tube -ID: 1									
#	User Name	Order ID	Order Date	Sample Name	Sample Type	Primer Name	Amount	Service Name	Status
1	perrier	1	2009-03-04	Sample1	PCR product	Primer1	100.000		Completed
<input type="button" value="Print"/>									

Fig N°3.32 – Print

This screen has the following details:

- **User name:** the name of the user who placed the order.
- **Order id:** the order id of the sample.
- **Order date:** date of the order.
- **Sample name:** the name of the sample.
- **Sample type:** the sample type.
- **Primer name:** the name of the primer used for the sequencing.
- **Amount:** amount of the sample.
- **Service name**
- **Status:** the status of the sample.
- **Print:** by hitting the print button, the admin will be able to print the details present on the screen.

3-10. Naming Convention

Admin can change the naming convention of the result files (sequence and chromatogram). The names of the result files follow a specific naming convention. These naming conventions depend on the location where the sample is processed, in the plate or tube. This naming convention will be used as the prefix of the generated result files.

To change the naming convention for plate/for the samples which are processed inside the plate, the admin can access the 'Plate Naming Convention (Name prefix will be reflected in result files) screen by hovering over the 'Other Operation' menu, select the 'Naming Convention' option and on selecting the 'Plate' option will display the following screen (Fig N°3.33).

The screenshot shows the 'Plate Naming Convention' configuration page in the LabCollector Sequencing Service Manager. The page title is 'Plate Naming Convention [Name prefix will be reflected in result files]'. It features a search bar with 'Search by ID: Order' and 'or by keyword' options, and a 'Language: en' dropdown. The navigation menu includes 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The main content area contains a table with the following items:

Plate Naming Convention [Name prefix will be reflected in result files]	
<input type="checkbox"/> Order ID	<input type="checkbox"/> Sample ID
<input checked="" type="checkbox"/> Sample Name	<input type="checkbox"/> Plate Name
<input checked="" type="checkbox"/> Plate Type	<input checked="" type="checkbox"/> Well
Or	
<input type="checkbox"/> Default	

At the bottom of the table, there are 'Save' and 'Cancel' buttons. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

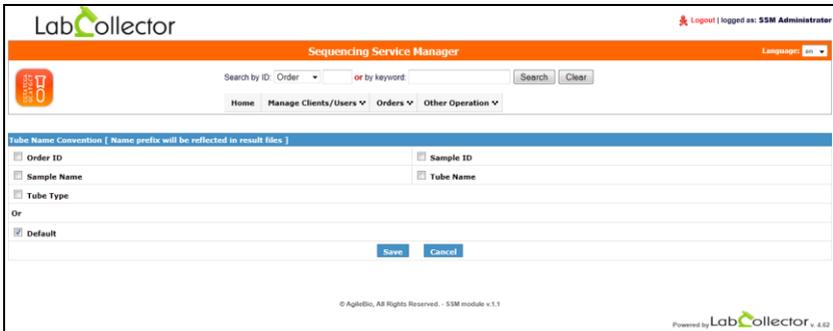
Fig N°3.33 – Plate Naming Convention

This screen displays the following details:

- **Order ID:** a unique identification number provided for an order.
- **Sample ID:** a unique identification number provided for the sample.
- **Sample Name:** the name of the sample.
- **Plate name:** the plate name.
- **Plate Type:** the plate type.
- **Well:** the well position in the plate.
- **Default:** a check box provided for selecting the default naming convention.
- **Save:** button provided to save the changes.
- **Cancel:** button provided to cancel the operation.

By hitting on the save button admin can save the new naming convention to the database.

To change the naming convention for Tube, the admin can access the 'Tube Naming Convention [Name prefix will be reflected in result files]' by hovering over the 'Other Operation' menu, select the 'Naming Convention' option and on selecting the 'Tube' option will display the following screen (Fig N°3.34).



The screenshot shows the 'LabCollector Sequencing Service Manager' interface. At the top, it displays the user is logged in as 'SSM Administrator' and the language is set to 'en'. The main navigation bar includes 'Home', 'Manage Clients/Users', 'Orders', and 'Other Operation'. The central area is titled 'Tube Name Convention [Name prefix will be reflected in result files]' and contains a form with the following fields:

<input type="checkbox"/> Order ID	<input type="checkbox"/> Sample ID
<input type="checkbox"/> Sample Name	<input type="checkbox"/> Tube Name
<input type="checkbox"/> Tube Type	

Below these fields, there is an 'Or' separator and a 'Default' checkbox which is checked. At the bottom of the form are 'Save' and 'Cancel' buttons. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved - SSM module v.1.1' and the 'Powered by LabCollector v. 4.02' logo.

3

Fig N°3.34 – Tube Naming Convention

This screen displays the following details:

- **Order ID:** a unique identification number provided for an order.
- **Sample ID:** a unique identification number provided for the sample.
- **Sample Name:** the name of the sample.
- **Tube name:** the plate name.
- **Tube Type:** the plate type.
- **Default:** a check box provided for selecting the default naming convention.
- **Save:** button provided to save the changes.
- **Cancel:** button provided to cancel the operation.

By hitting on the save button, the admin can save the new naming convention to the database

4- SEARCH

The application provides the facility to search for a sample from the existing list based on the id (order/plate/sample) or using a keyword (any character of the sample name). This is a common functionality provided for both the type of users, which includes the 'Admin' and the 'User' respectively.

4

4-1. Search screen for the admin

The search screen for the admin will appear as follows (Fig N°4.1).

#	Sample ID	Order ID	Sample Name	Sample Type	Primer Name	Amount	Tube/Plate	Well	Status	Result	View	Edit	Cancel
1	1	1	Sample1	PCR product	Primer1	100.000	Tube_1		Completed	Seq ABI	View	Edit	Cancel
2	1	1	Sample2	PCR product	Primer1	100.000	Plate1	B3	Completed	Seq	View	Edit	Cancel
3	1	1	Sample3	PCR product	Primer2	100.000			Assigned		View	Edit	Cancel

Fig N°4.1 – Search by ID

This screen displays the following details of the search result:

- **Sample ID:** a unique identification number provided for a sample. You can also print a barcode to track your sample.
- **Order ID:** a unique identification number provided for an order.
- **Sample Name:** the name of the sample.
- **Sample Type:** the name of the sample type.
- **Primer name:** the name of the primer.
- **Amount:** the amount of the sample.
- **Tube/Plate:** the name of the plate or tube.
- **Well:** the position of the well if plate is selected.
- **Status:** the status of the sample.
- **Result:** the name of the result file if they are uploaded by the admin.
- **View:** a link is provided to view the detailed information about the sample.
- **Edit:** a link is provided to edit the previously entered details.

- **Cancel:** a link is provided to cancel the sample if status of the sample is 'Assigned'.

Search by order id

To search for a sample using the 'Order Id', enter the order id of the sample to be searched in the search field, and select the 'Order' option from the drop down list and click on the search button. The application will display the searched result on the screen. In case of an invalid search, the application will generate the message 'No Record Found'.

4

Search by plate id

To search for a sample using the 'Plate Id', enter the plate id of the sample to be searched in the search field, and select the 'Plate' option from the drop down list and click on the search button. The application will display the searched result on the screen. In case of an invalid search, the application will generate the message 'No Record Found'.

Search by sample id

To search for a sample id, enter the sample id to be searched in the search field, and select the "Sample" option from the drop down list and click on the search button. The application will display the searched result on the screen. In case of an invalid search, the application will generate the message "No record found".

Search by Keyword

To search for a sample using keyword, enter the keyword, (any character of the sample name), to be searched in the search field and click on the search button. The application will display the searched result on the screen. In case of an invalid search, the application will generate the message 'No Record Found'.

4-2. Search screen for the user

The search screen for the user will appear as follows (Fig N°4.2).

The screenshot shows the LabCollector Sequencing Service Manager interface. At the top, there is a search bar with the text 'Search by ID: 1 or by keyword' and a 'Search' button. Below the search bar, there are navigation links for 'Home', 'Orders', and 'Other Operation'. The main content area is titled 'Order Sample Manager' and contains a table with the following data:

#	Order ID	Sample Name	Purification Method	Sample Type	Primer Name	Amount	Size	Status	Result	View	Edit	Edit
1	1	Sample1	PCR product	PCR product	Primer1	100.000	0	Completed	Seq ABI	View	Edit	Cancel
2	1	Sample2	PCR product	PCR product	Primer1	100.000	0	Completed	Seq	View	Edit	Cancel
3	1	Sample3	PCR product	PCR product	Primer2	100.000	0	Assigned		View	Edit	Cancel

At the bottom of the table, there is a 'Display #' dropdown menu set to 'Select' and a 'Go Page' button. The footer of the page includes the copyright notice '© Agilent, All Rights Reserved. - SSM module v.1.1' and the text 'Powered by LabCollector v. 4.02'.

Fig N°4.2 – Search by ID

This screen displays the following details of the search result:

- **Order ID:** a unique identification number provided for an order.
- **Sample Name:** the name of the sample.
- **Purification method**
- **Sample Type:** the name of the sample type.
- **Primer name:** the name of the primer.
- **Amount:** the amount of the sample.
- **Size**
- **Status:** the status of the sample.
- **Result:** the name of the result file if they are uploaded by the admin.
- **View:** a link is provided to view the detailed information about the sample.
- **Edit:** a link is provided to edit the previously entered details.
- **Cancel:** a link is provided to cancel the sample if status of the sample is 'Assigned'.

Search by order id

To search for a sample using the 'Order Id', enter the order id of the sample to be searched in the search field and click on the search button. The application will display the searched result on the screen. In case of an invalid search, the application will generate the message 'No Record Found'.

Search by Keyword

To search for a sample using the keyword, enter the keyword (any character of the sample name) to be searched in the search field and click on the search button. The

application will display the searched result on the screen. In case of an invalid search, the application will generate the message 'No Record Found'.

NOTE

Application provides the facility to change the number of the records displayed on the screen. This can be achieved by selecting the required number of record from the drop down menu provided next to 'Display #' (Fig N°4.3). There is also a facility to navigate to a specific page by entering the page number in the text box provided just before the 'Go page' button and on clicking on the 'Go page' button will reveal the entered page.

4

The screenshot shows the LabCollector Sequencing Service Manager interface. At the top, there is a search bar with 'Search by ID: 1 or by keyword' and a 'Search' button. Below the search bar are navigation tabs: 'Home', 'Orders', and 'Other Operation'. The main content area is titled 'Order Sample Manager' and contains a table with the following data:

#	Order ID	Sample Name	Purification Method	Sample Type	Primer Name	Amount	Size	Status	Result	View	Edit	Edit
1	1	Sample1		PCR product	Primer1	100.000	0	Completed	Seq ABI	View	Edit	Cancel
2	1	Sample2		PCR product	Primer1	100.000	0	Completed	Seq	View	Edit	Cancel
3	1	Sample3		PCR product	Primer2	100.000	0	Assigned		View	Edit	Cancel

Below the table, there is a 'Display #' dropdown menu with options: Select, 25, 50, 75, 100. To the right of the dropdown is a 'Go Page' button. The footer of the interface includes 'Rights Reserved - SSM module v.1.1' and 'Powered by LabCollector v. 4.32'.

Fig N°4.3

5- UPGRADING AND UPDATING

To update or upgrade the **SSM Add-on** module, just download it on our website (www.labcollector.com). Then, unzip the folder and paste files in the following folder:

4

Programmes > AgileBio > LabCollector > www > LabCollector* > Extra_Module > ssm

**The name of this folder is the Laboratory Nickname chosen when LabCollector was installed.*



<http://www.labcollector.com>

sales@agilebio.com

AgileBio USA
1133 Broadway
Suite 706
New York, NY 10010
USA
Tel: (800) 453 9128
Fax: (800) 453 9128

<http://www.agilebio.com>

AgileBio Headquarters
75 rue de Lourmel
75015 Paris
FRANCE
Tel: 01 41 79 15 85
Fax: 01 72 70 40 22