



SampleWare 3.0

Use Case Tutorial

Tutorial on Five Common Use Cases

- **Aliquot Management**
- **Chain of Custody**
- **Contract Research Management**
- **Inventory Management**
- **High Throughput and Auto-attach**

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Introduction

Sampleware is an easy-to-use, customizable laboratory management database to store and organize sample data. It allows a lab to store and track sample data with ease. This tutorial will help you to quickly implement most common Use Cases in Sampleware.

How This Tutorial Is Organized

The Quick Start guide provides an overview of the basic functionality of SampleWare. This Tutorial is the next step in immediately using Sampleware for your research requirements in the following areas -

- Aliquot Adjustment
- Chain of Custody
- Contract Research Management
- Inventory Management
- High Throughput and Auto-Attach

References are made to the basic steps described in the Quick Start Guide, so please keep that handy during this tutorial.

1. Aliquot Management - SampleWare can manage stock samples and distribution of aliquots

2. Chain of Custody - SampleWare can be used to track a sample through a work flow with multiple steps or scientists

3. Contract Research - SampleWare can manage and organize samples from multiple customers and projects

4. Inventory Management - SampleWare can manage supplies and resources associated with particular customers and projects

5. High Throughput and Auto-attach - SampleWare can be used in a high throughput environment with auto-attach features to link and manage all files associated with your research in a central location.

Use Case 1. Aliquot Management

Please refer to QuickStart Guide (Steps 1-3) for detailed steps –

1.1. Add a Data Template, Plasmid, with the following numeric fields – PlasmidID
Cell Line, Vol (ul)

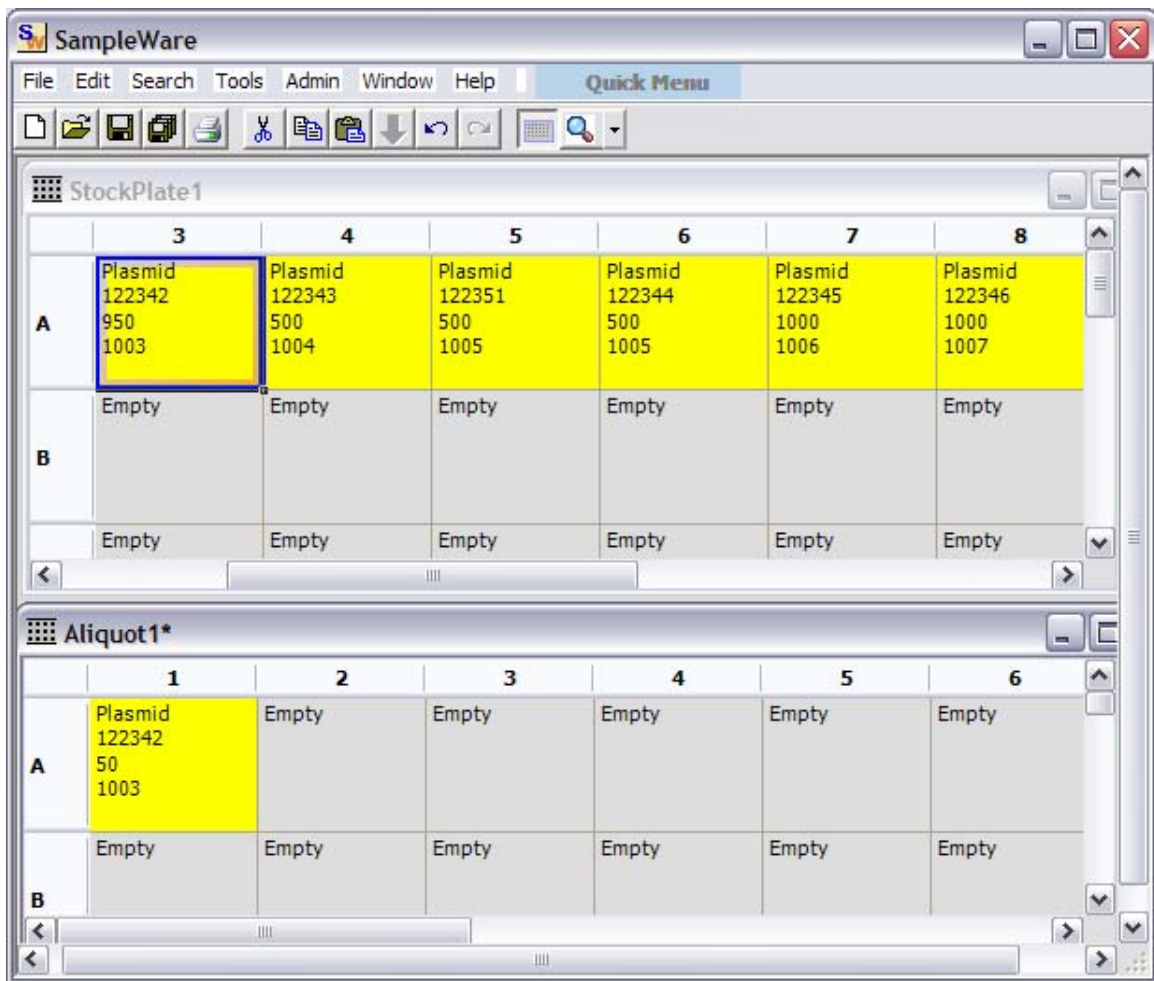
1.2. Create a Directory, Freezer 1

1.3. Add a Container to Freezer1 named Stock Plate 1 selecting the Plasmid Data Template as the default from the dropdown list. Fill in a few rows of data as shown below. This is now your master Stock Plate. Save the Container.

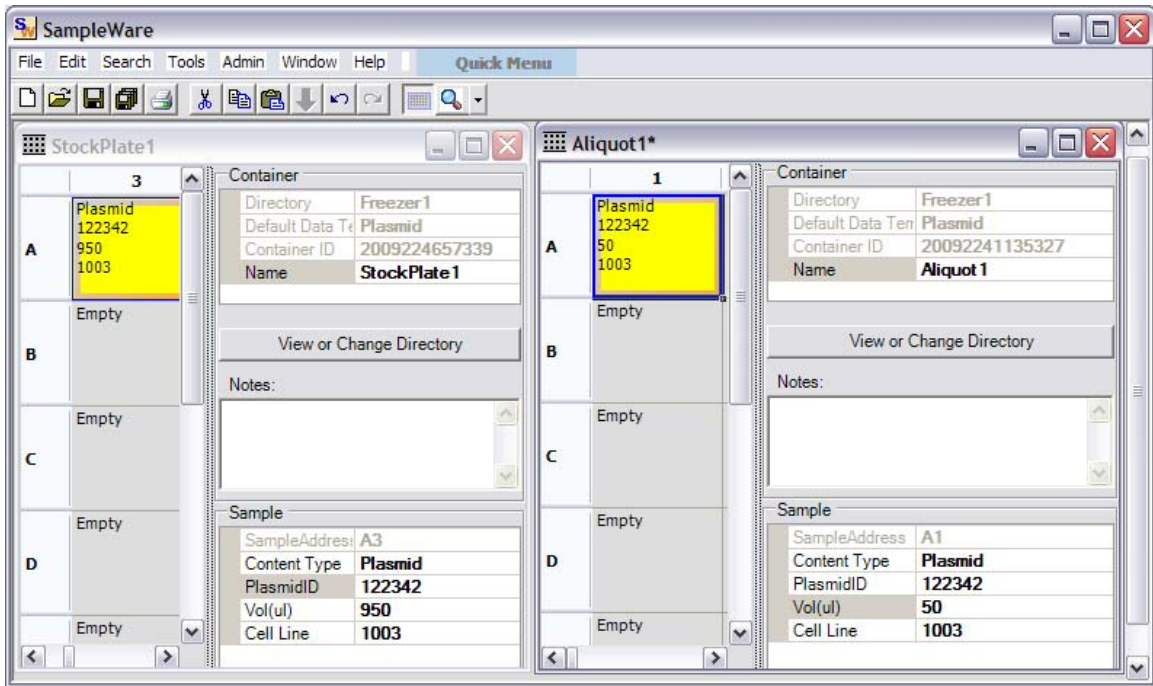
Row	Col	Docs	Content Type	PlasmidID	Vol(ul)	Cell Line
A	1		Plasmid	122340	100	1001
A	2		Plasmid	122341	100	1002
A	3		Plasmid	122342	1000	1003
A	4		Plasmid	122343	500	1004
A	6		Plasmid	122344	500	1005
A	7		Plasmid	122345	1000	1006
A	8		Plasmid	122346	1000	1007
A	9		Plasmid	122347	100	1008
A	10		Plasmid	122348	50	1009
A	11		Plasmid	122349	2000	1010
A	12		Plasmid	122350	500	1011
B	1		Empty			

1.4. Add another Container named Aliquot 1, using the Plasmid Data Template, to which you will be transferring samples from your master Stock Plate.

1.5. Switch to Container View (QuickStart Guide – Step 6), tile the windows horizontally for ease, and copy (right-clicking on the cell) and paste Cell line 1003 from the Stock Plate to the Aliquot plate.

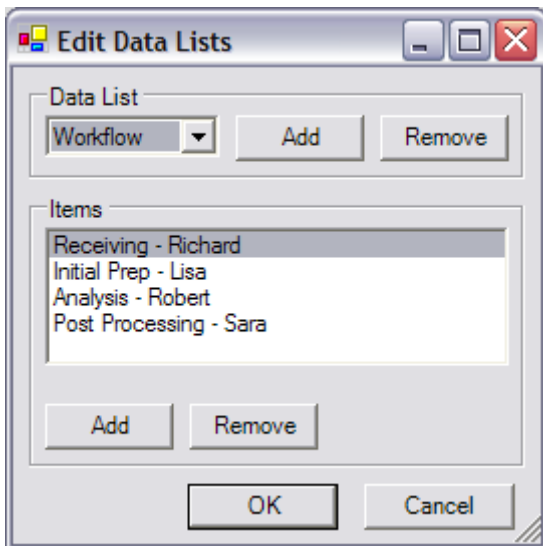


Use the Property Grid on the right side of the screen (as shown below), to adjust volumes for the two plates according to your transfer. Save and close the Aliquot1 Container.

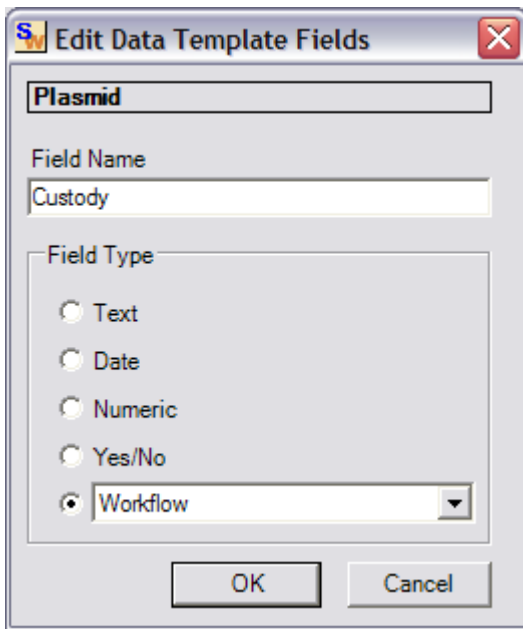


Use Case 2. Chain of Custody

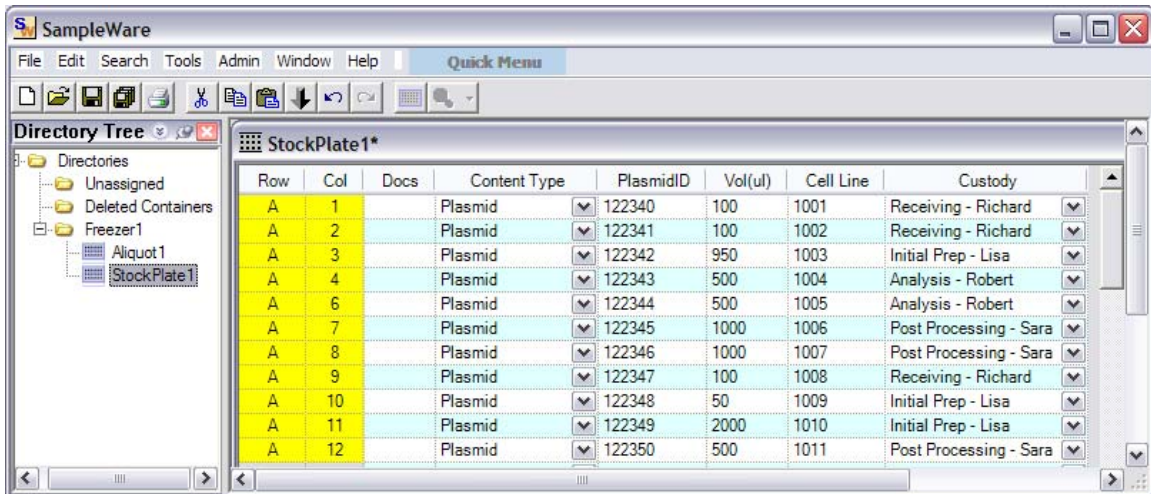
2.1. Create a Data List (QuickStart Guide – Step 4), named Workflow, which contains a List of Workflow processes and the person responsible for that process. This Data List will be used in the next step as a field in the Plasmid Data Template.



2.2. Edit the Plasmid Data Template (QuickStart Guide- Step 3) to add a Custody field of type Workflow.

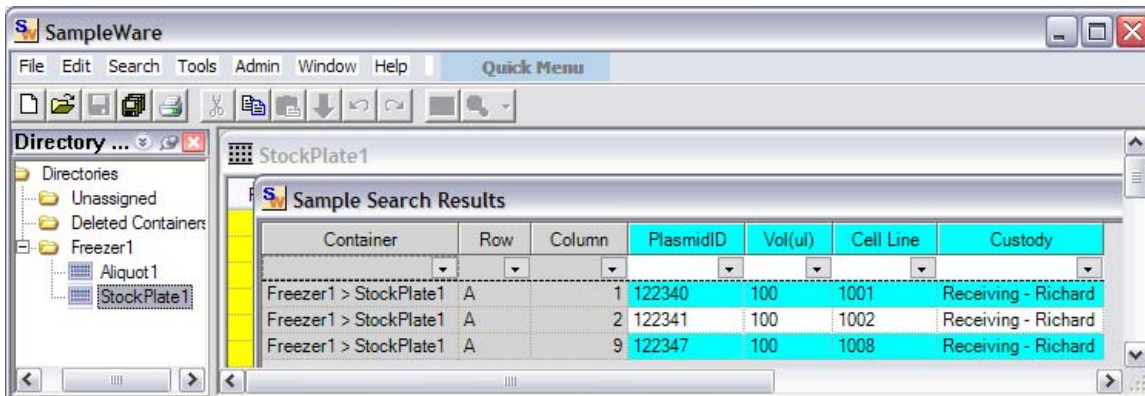
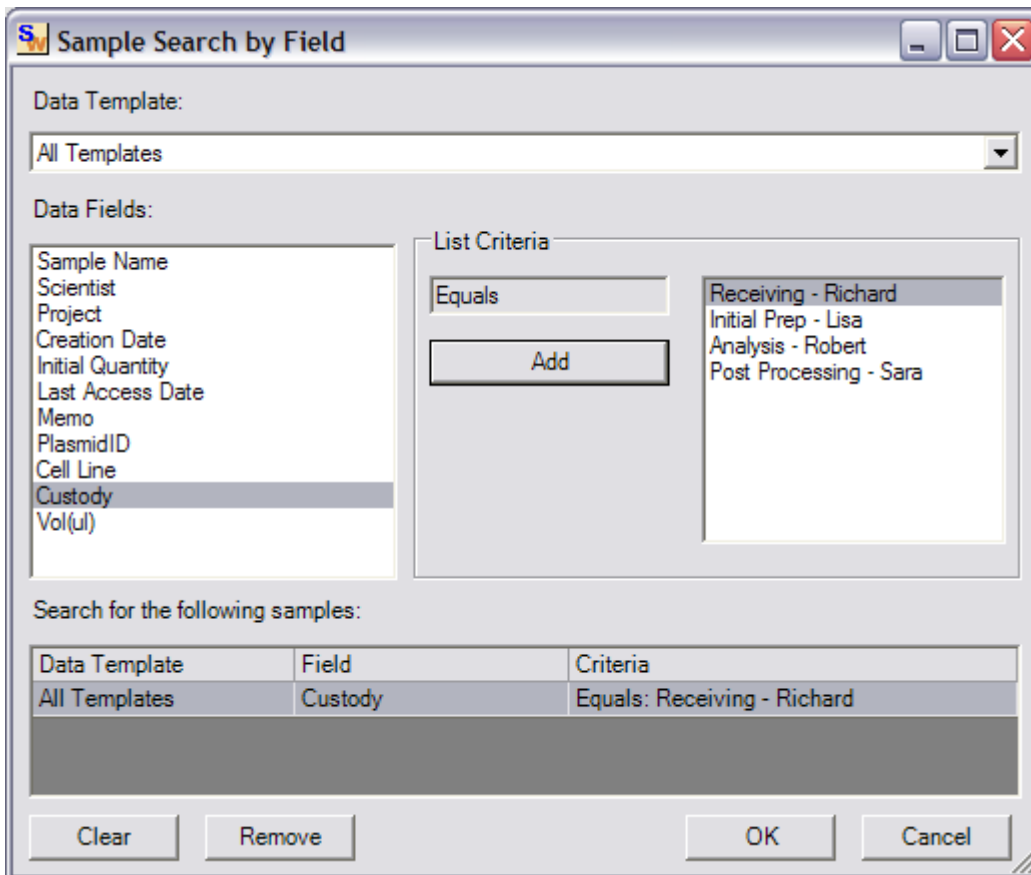


2.3. In the Directory View, double click on the StockPlate1 Container. Use the dropdown list to populate the Custody column with data. Save the Container.



As the sample moves through the process workflow, the Custody field is updated to track sample progress and individual workloads.

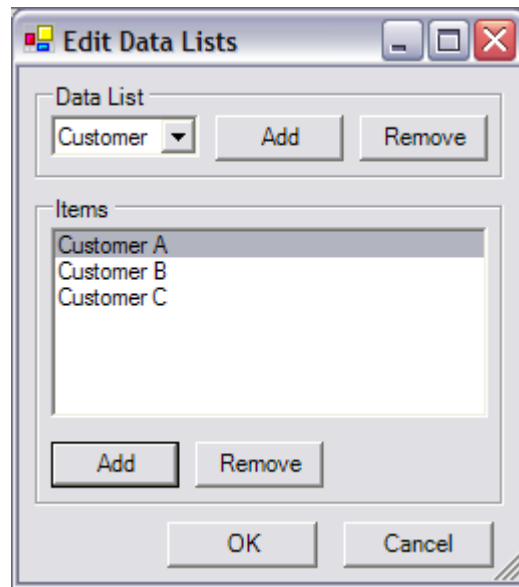
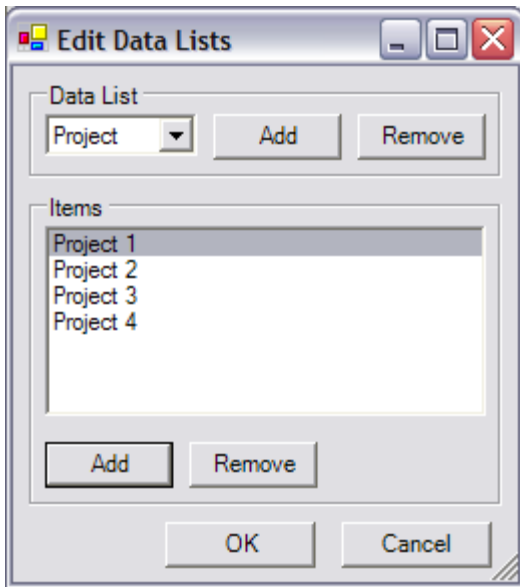
2.4 Using the Sample Search by Field tool, (Search > Sample Search by Field) select the Custody Data Field and a particular scientist to track all samples at a current stage in the process, or belonging to that scientist.



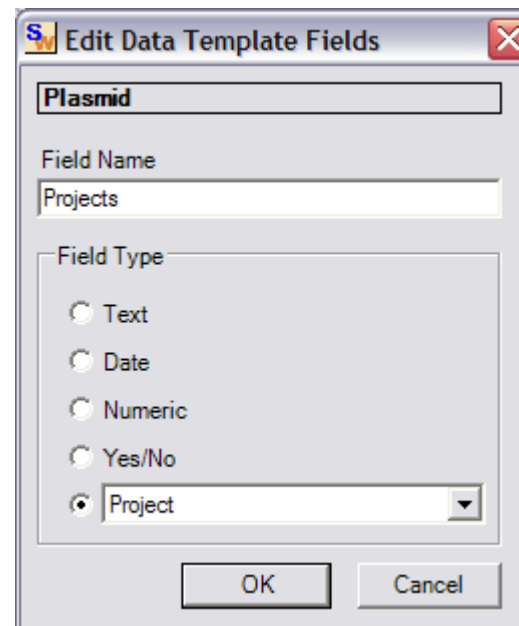
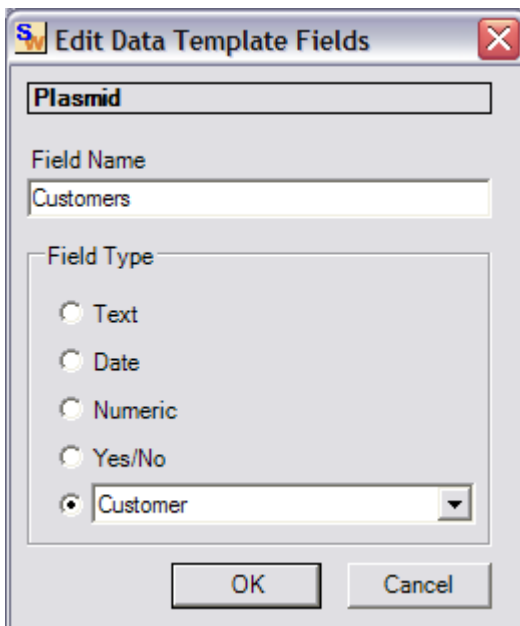
Using these tools, you always have an up-to-date record of the stage of processing your samples are currently in, and the scientists working on them. Notice that the Sample Search by Field tool also provides the physical location of your samples.

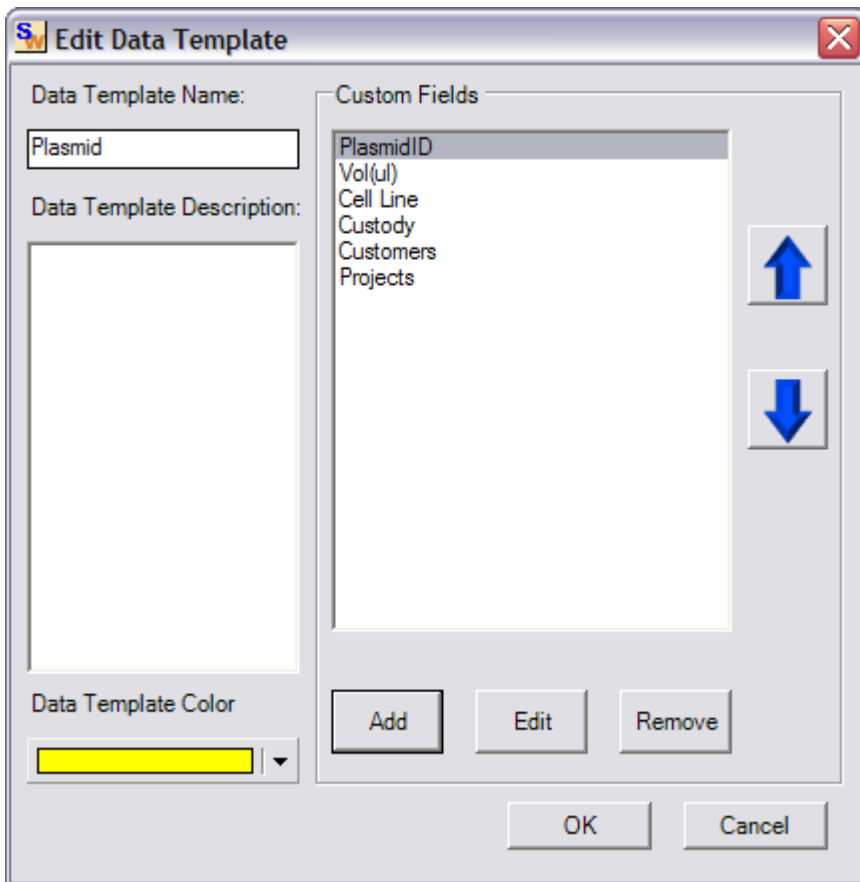
Use Case 3. Contract Research Management

3.1. Create two Data Lists (QuickStart Guide - Step 4), named Customer and Project, and add sample fields for customer and project names.



3.2. Edit the Plasmid Data Template (QuickStart Guide - Step 3) to add two fields named Customers and Projects of Field Type Customer and Project respectively.





3.3. Return to Data Grid View for StockPlate1, and notice that two columns for tracking Customer and Project have been added. Use the dropdown list to enter sample data in these columns.

Row	Col	Vol(ul)	Cell Line	Custody	Customers	Projects
A	1	100	1001	Receiving - Richard	Customer A	Project 1
A	2	100	1002	Receiving - Richard	Customer B	Project 2
A	3	950	1003	Initial Prep - Lisa	Customer B	Project 4
A	4	500	1004	Analysis - Robert	Customer A	Project 1
A	6	500	1005	Analysis - Robert	Customer C	Project 1
A	7	1000	1006	Post Processing - Sara	Customer A	Project 2
A	8	1000	1007	Post Processing - Sara	Customer B	Project 1
A	9	100	1008	Receiving - Richard	Customer B	Project 3
A	10	50	1009	Initial Prep - Lisa	Customer A	Project 3
A	11	2000	1010	Initial Prep - Lisa	Customer C	Project 4
A	12	500	1011	Post Processing - Sar	Customer C	Project 4
B	1					

Use the dropdown list to enter sample data in these columns. Save and close the StockPlate1 Container. SampleWare now enables you to not only track the internal processing of your samples, but also associate these to your external customers and their particular projects.

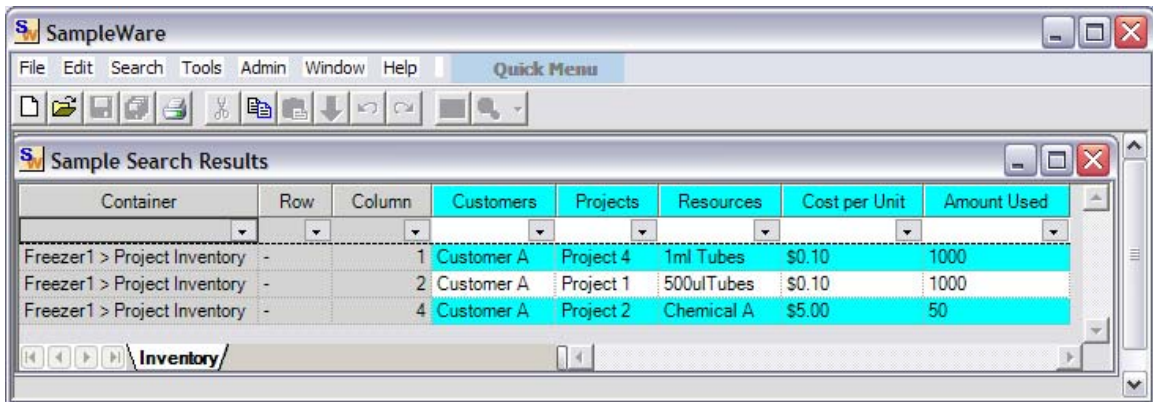
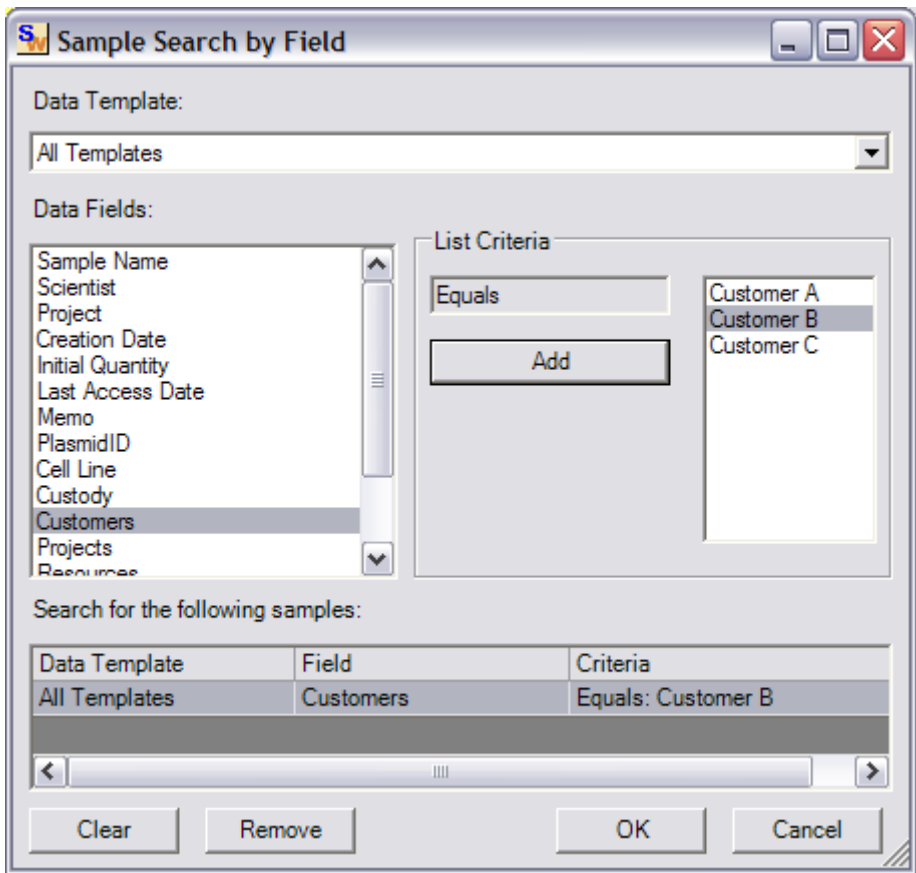
So far we have tracked the status of samples and the workflow process. Another key area of interest is the Inventory used for each customer. Let's track this now.

Use Case 4. Inventory Management

Resource records are added to a 'Dynamic Sample Bin' to track the use and cost of materials on a project. The Dynamic Sample Bin is an expandable Container, to which you can add as many fields as you require. The customer and project is recorded as well as the cost and amount of material used. Notice that you can sort on any of the columns. (This example sorts by Cost per Unit). Save the Project Inventory Container.

Row	Col	Content Type	Customers	Projects	Resources	Cost per Unit	Amount Used
-	4	Inventory	Customer A	Project 2	Chemical A	\$5.00	50
-	8	Inventory	Customer C	Project 1	Chemical C	\$2.00	100
-	5	Inventory	Customer B	Project 2	Chemical B	\$1.00	10
-	1	Inventory	Customer A	Project 4	1ml Tubes	\$0.10	1000
-	2	Inventory	Customer A	Project 1	500ulTubes	\$0.10	1000
-	3	Inventory	Customer B	Project 3	1ml Tubes	\$0.10	500
-	6	Inventory	Customer C	Project 3	500ulTubes	\$0.10	1000
-	7	Inventory	Customer	Project 2	1ml Tubes	\$0.10	50
-	9	Inventory	Customer B	Project 4	1ml Tubes	\$0.10	10

3.5. Using the Sample Search by Field tool, (QuickStart Guide – Step 7) search for records for a particular customer or project. The results will return all sample and materials associated with that customer or project.

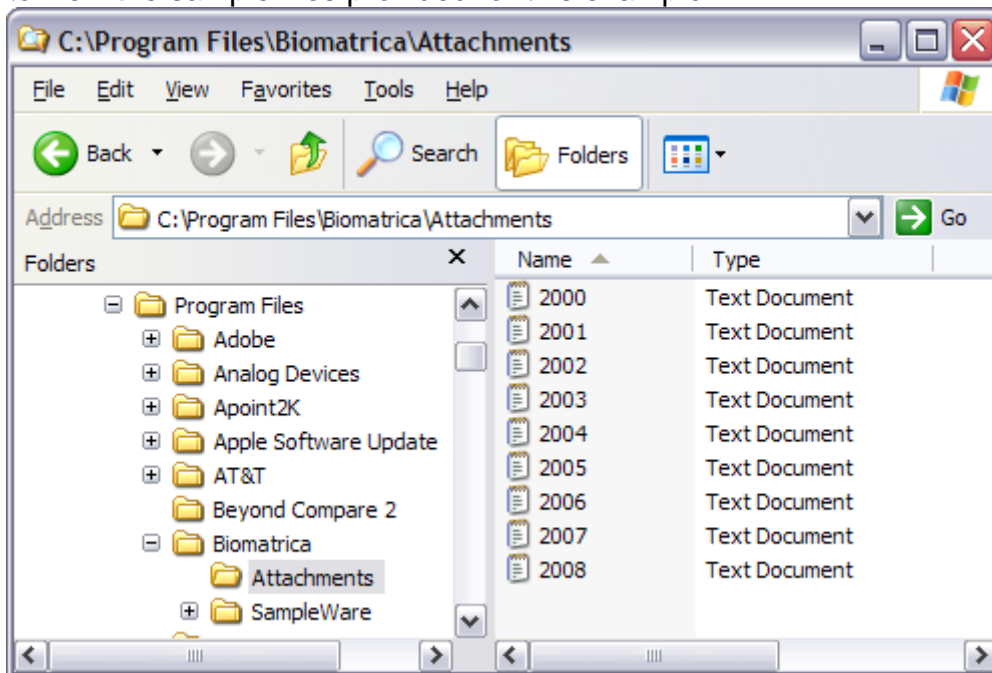


Use Case 5. High Throughput and Auto Attach

5.1. (Details on the Auto-Attach feature are in the QuickStart Guide – Section 8)
 Edit the Plasmid Data Template (QuickStart Guide - Step 3) to add a field named Barcode. Enter sample data (2000 – 2010 in this case) to simulate scanning of items in Freezer 1

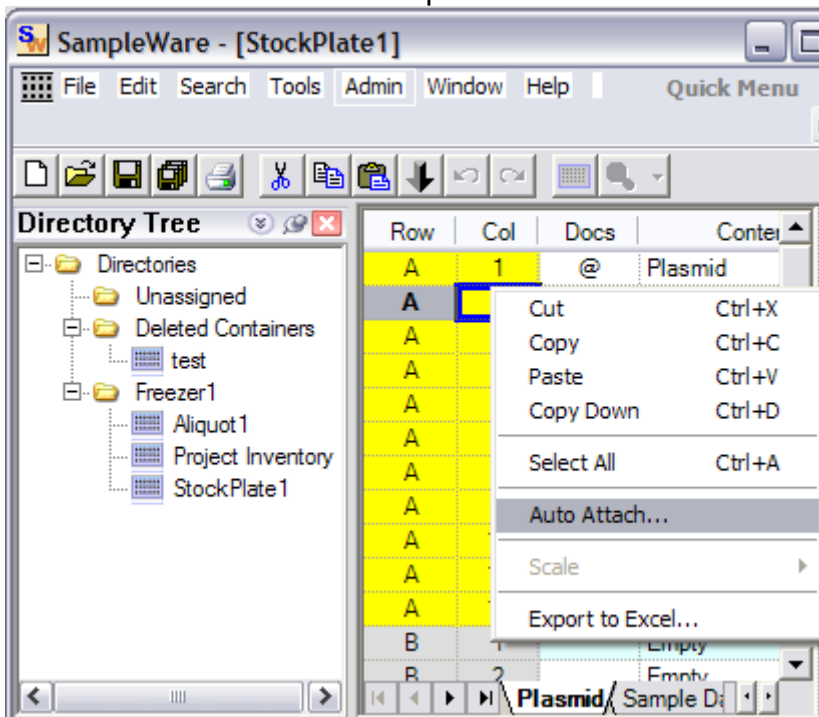
Row	Col	Content Type	PlasmidID	Vol(ul)	Cell Line	Barcode
A	1	Plasmid	122340	100	1001	2000
A	2	Plasmid	122341	100	1002	2001
A	3	Plasmid	122342	950	1003	2002
A	4	Plasmid	122343	500	1004	2003
A	6	Plasmid	122344	500	1005	2004
A	7	Plasmid	122345	1000	1006	2005
A	8	Plasmid	122346	1000	1007	2006
A	9	Plasmid	122347	100	1008	2007
A	10	Plasmid	122348	50	1009	2008
A	11	Plasmid	122349	2000	1010	2009
A	12	Plasmid	122350	500	1011	2010
B	1	Empty				

5.2. Browse to folder - C:\Program Files\Biomatrica\Attachments to view the sample files provided for this example.

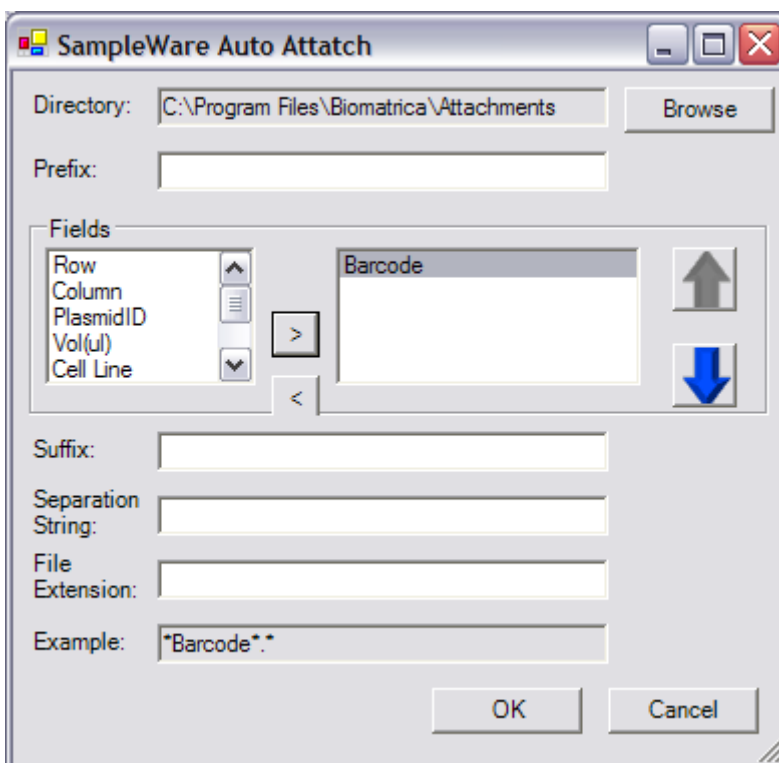


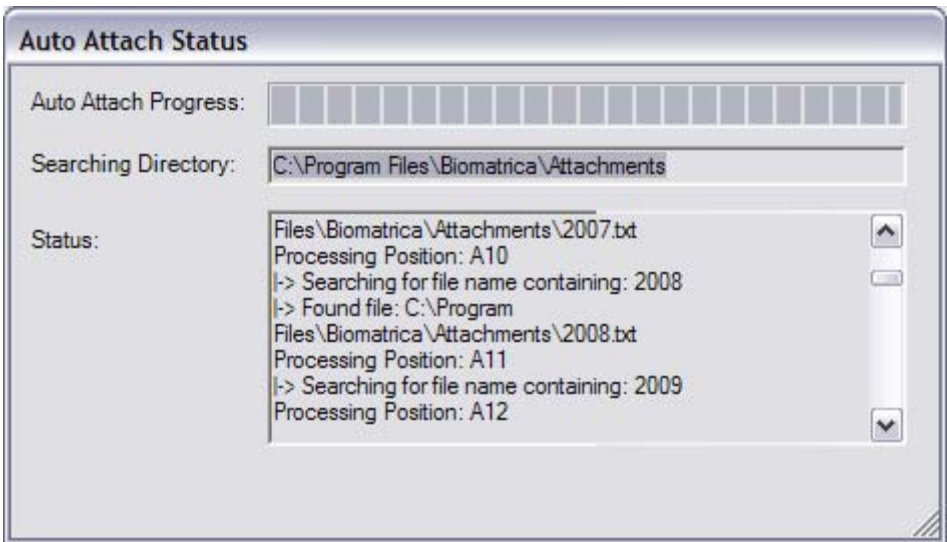
These files contain information associated with our samples, and are identified by Barcode.txt. The next steps will link these files with corresponding samples in Sampleware.

Return to Data Grid View to the Stock Plate Container, and Right click on a sample on 'Auto-attach' to associate provided sample files named according to Barcodes to StockPlate1 samples.

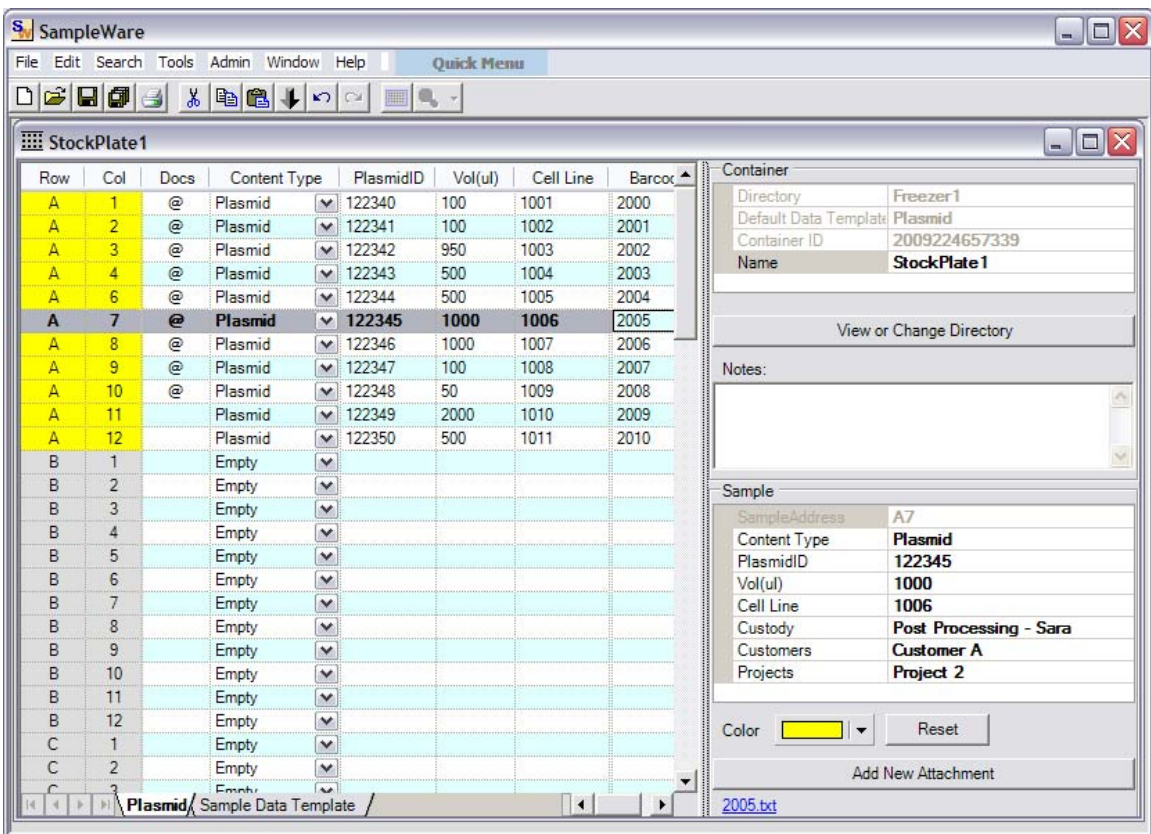


Select the field (Barcode in this example) which is used to identify the file names in the Attachment folder



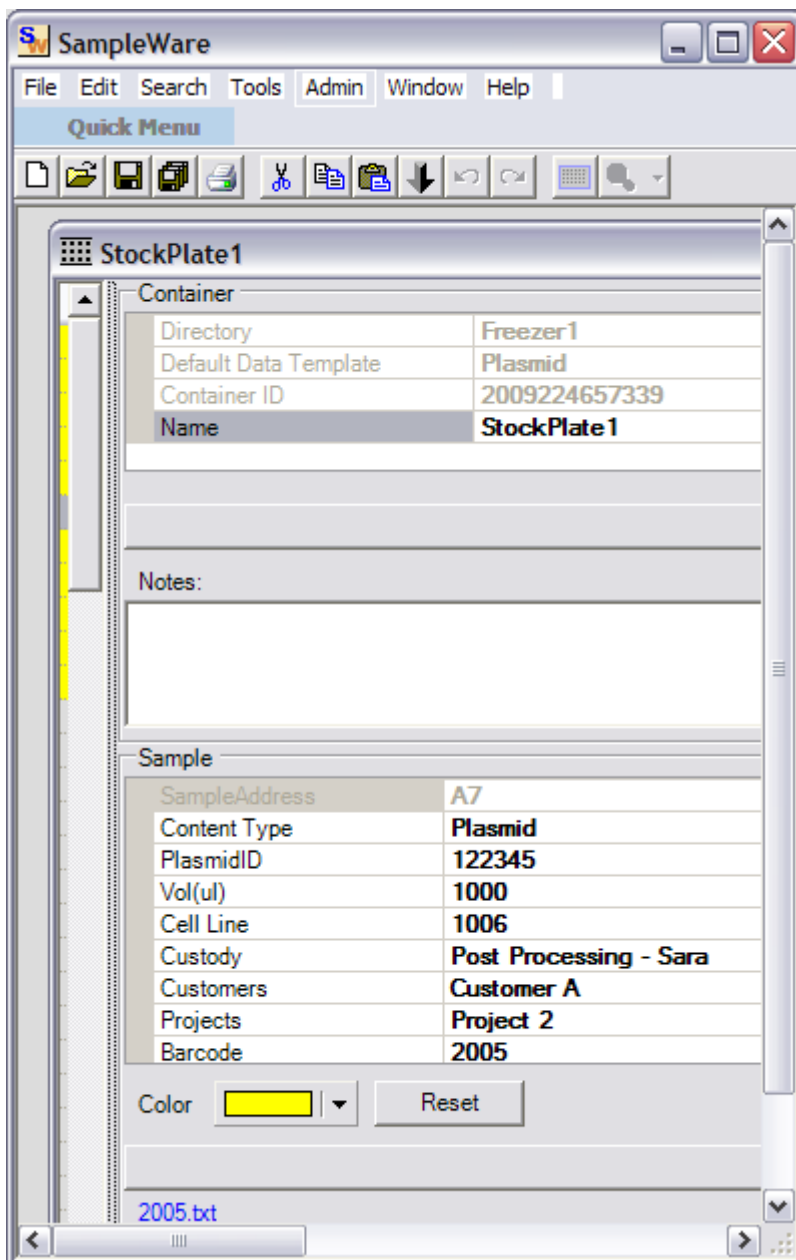


Returning to the Data Grid, notice that the 'Docs' column has '@' to indicate attached files. The attached files can be seen on the right hand Property Grid.



The Auto Attach feature ensures all your data is linked together in a central location through Sampleware. The High throughput option allows you to attach hundreds of files with one click.

Details of each sample can be viewed in the Property Grid –



The particular sample viewed above is:

- Located in –Freezer1 > StockPlate1 > (well plate address) A7
- Described by – Content Type, PlasmidID, Volume and Cell Line
- Currently in stage – Post-Processing
- In the custody of – Scientist Sara
- Belongs to – Customer A, Project 2
- Identified by Barcode – 2005
- And has one attachment – 2005.txt