Chapter 4 Products

This chapter—

- Familiarizes the user with RxSolution's product list, from how a new product is added to how an existing product can be changed or deleted
- Describes how to do a variance on a product
- Explains how RxSolution can be used to assist in a facility's stock management
- Explains how to calculate suggested stock levels based on consumption
- Describes how to create a product budget
- Describes how UnLock a Locked Product

RxSolution User's Guide	

Understanding the RxSolution Product List

The products section of RxSolution can be used to—

- Display a profile of the stock kept in a facility
- Provide a detailed description of a selected product
- Calculate stock levels
- Adjust reorder levels
- Provide information on contracts and finances

What Is the Product Catalog?

The **Product Catalog** is a detailed list of all the products in RxSolution. The list of products is normally compiled from the national essential medicines list (EML)/essential drugs list (EDL) or the facility's formulary or normal stock list. In RxSolution the EML/EDL is the default list displayed whenever you click on the **Products** icon on the toolbar. This list includes both pharmaceuticals and nonpharmaceutical products such as test kits, surgical items, and similar products.

How Do I Get to the Products Screen?

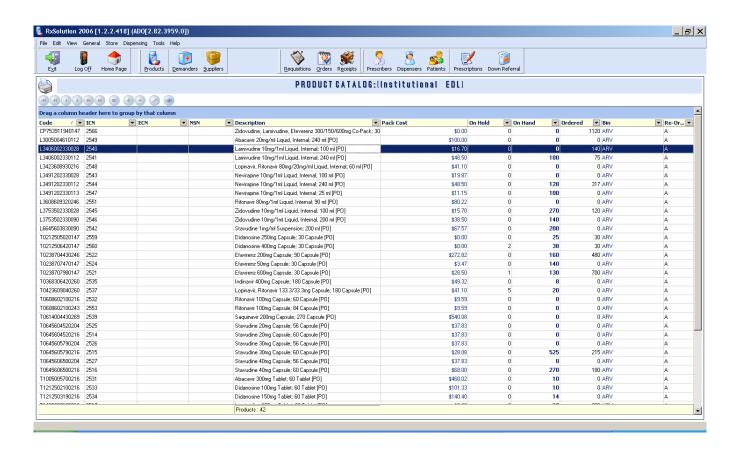


- 1. Click on the **Products** icon
- 2. The **Product Catalog: [Institutional EDL]** screen will appear.

What Does the Products Screen Look Like?

The **Product Catalog: [Institutional EDL]** screen has the print icon to the far left and the navigation buttons below the print icon. The list of products contains the following information for all products—

- Codes, including the product code number, the internal code number (ICN), the national stock number (NSN), and the external code number (ECN) (see Tables 4-1 and 4-2)
- Descriptions, including the product name, type, and dosage amount, as well as the cost per pack
- Stock status, including how much of an item is on hand or ordered, where the stock is located, and the reorder status

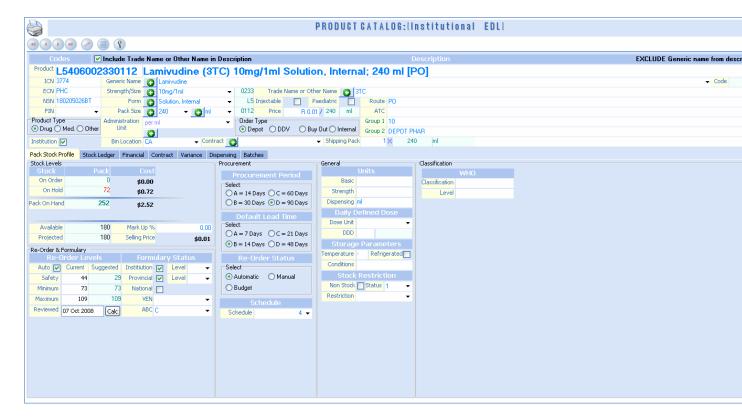


Using RxSolution for Facility Stock Management

How Do I Access a Detailed Description of a Particular Product?



- 1. Click on the **Products** icon
- 2. Double click on the product required. For example, in the screen above, "Lamivudine 10 mg/1 ml Liquid, Internal, 100 ml PO" has been highlighted. To select this product, double click on that highlighted entry.
- 3. The following screen appears—



A detailed description of the 16 parts of this product description window is provided in the sections below. The first nine topics provide essential product data—

- Product description and the RxSolution product code
- Other product code numbers
- Generic Name
- Strength/Size, Form, and Pack Size
- Trade Name or Other Name
- Injectable or Paediatric dosage form
- Route, ATC, and Groups
- Product Type
- Order Type
- Institution, Bin Location, Contract, and Shipping Pack
- Mark Up %
- **Selling Price** (the cost price plus markup)

Additional information about the product is displayed on seven tabs on the bottom half of the screen—

- Pack Stock Profile tab
- Stock Ledger tab
- Financial tab
- Contract tab
- Variance tab

- Dispensing tab
- Batches tab

Product Description and the RxSolution Product Code

Product L3406002330028 Lamivudine 10mg/1ml Liquid, Internal; 100 ml [PO]

RxSolution automatically generates a unique code for each product entered in the system. Table 4-1 describes the components of this code.

Table 4-1. Components of Rx Solution Product Code

Component	Definition
L3	Denotes the form of the product—in this case a liquid
4060	The code of the generic name of the product—in this case, lamivudine
0233	The code for a product with a strength of 10 mg/1 ml
0028	The code for a pack size of 100 (ml)

Other Product Code Numbers



In addition to the product code assigned by RxSolution, each product has four other code numbers used for different purposes. The various code numbers of the product are displayed in this section of the screen and are defined in Table 4-2.

Table 4-2. Other Product Code Number Definitions

Term	Description
ICN	Item Control number—generally, the code that is provided by the supplier of the product
ECN	Extended Control number—the number allocated to the product by the province or other level of the health system
NSN	National stock number—mandatory for all products in some countries, e.g., South Africa
FIN	Financial code—the financial code for a product

Generic Name, Strength/Size, Form, and Pack Size



The generic name, strength or size, form, and pack size are displayed in this section of the screen. You can select an existing entry by clicking on the down-facing arrow to the right of the

field name. If you need to add or edit an entry, click on the button beside the field name.

Trade Name or Other Name



RxSolution provides the option of including a trade name or excluding the generic name in the product description. The **Trade Name or Other Name** field can also be used for the generic shorthand (e.g., using PZA for pyrazinamide). Information entered in this field will appear under the **Supplement** column in the Product Catalog. Excluding the generic name is often necessary when the product name is complicated or too long, or both, as in the case of total parenteral nutrition (TPN) and combination products such as oral contraceptives. The use of a supplementary name helps improve readability and simplifies the product name.

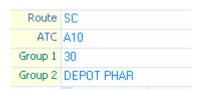
Select or deselect these options by clicking in the check boxes (see red arrows above) located at the top of the product description window.

Injectable or Paediatric Dosage Form



Other details include whether the product is an injectable or a pediatric dosage form. These are indicated by selecting the check box. This option is useful for reporting purposes.

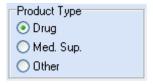
Route, ATC, and Groups



The **Route** denotes the route of administration of the product (e.g., PO = per os = oral). The options are defined in the **System Defaults**. Click on the drop-down list next to the route to display the options available, and then click on the appropriate option to select it.

The classifications that may be used are **ATC**, **Group 1**, and **Group 2**. The ATC classification stands for the anatomic-therapeutic-chemical classification used by the World Health Organization (WHO). The grouping options are defined in the **System Defaults** and are used mainly for reporting purposes. Group 2 can be used to define suppliers to facilitate purchase orders.

Product Type



A product may be categorized as a drug, a medical supply, or "other" for data sorting and reporting purposes.

Order Type



Select the order type to indicate how the product is acquired. This classification is helpful for reporting purposes. Products can be ordered in four different ways—

- From a **Depot**.
- By **DDV**. Direct Delivery. A depot buys on the facility's behalf, and stock is delivered directly to the facility.
- By **Buy Out**. You purchase directly from another supplier.
- **Internal**. Products are prepared, manufactured, or both, internally (e.g., pre-packs or items that are manufactured extemporaneously such as creams or ointments).

Institution, Bin Location, Contract, and Shipping Pack



These four fields are defined in Table 4-3.

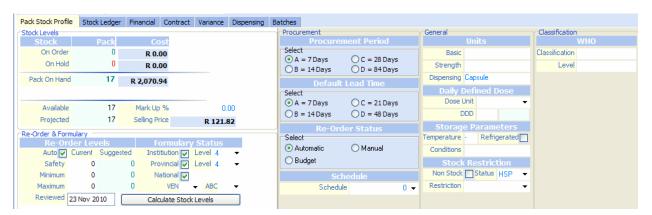
Table 4-3. Institution, Bin Location, Contract, and Shipping Pack

Term	Description
Institution	Check this box to signify that the product belongs to the facility's list (e.g., the hospital formulary).
Bin Location	The bin refers to the physical location (normally aisle and shelf) of the product. This information is essential for stock-taking and picking purposes.
Contract	The contract field refers to the contract number for purchasing.
Shipping Pack	Shipping pack information provides information about how products are packaged and shipped (e.g., 20 bottles of 200 ml each).

Pack Stock Profile Tab

For pack stock profile information, click on the **Pack Stock Profile** tab. The tab will have a light yellow background to indicate that it has been selected.

The Pack Stock Profile screen looks like this—



A product stock profile describes the maximum and minimum number of units of a product needed, as well as the safety level of the product required. The suggested levels indicated are suggestions only, based on consumption history as determined by the historical period recorded in the budget determination, and these levels *must* be verified each time stock is to be purchased. Stock levels influence how much stock is to be purchased when running an auto-generated purchase order, provided that the reorder status for the products is set to automatic. See Tables 4-4 through 4-6 for more details on other terms used in stock profile.

Table 4-4. Stock-Level Terms

Term	Description
On Order	The quantity ordered but not yet received
On Hold	The quantity requested from your demander by requisition but not yet posted
Pack on Hand	The quantity presently in stock
Available	Stock on hand minus stock on hold
Projected	Available stock plus stock on order
Mark Up %	The markup percentage for the item
Selling Price	The cost price plus the markup percentage

Table 4-5. Reorder-Level Terms

Term	Description
Auto	Check this box to set the item to automatically update the stock levels when the Auto Adjust Stock Levels for all Products procedure is run.
Safety	The extra quantity of product carried to protect against possible stock-outs if the demand suddenly increases or lead time increases. The Current column is user defined and the Suggested column is calculated by the software, based on user-defined parameters and past consumption.
Minimum	The stock level at which an order must be placed; also known as the "reorder level." The Current column is user defined, and the Suggested column is calculated by the software, based on user-defined parameters and past consumption.
Maximum	The optimal maximum stock level of a product in a facility. This is the quantity that RxSolution will use to calculate the order quantity for purchase orders using the Add (Auto Generate Purchase Order) Ctrl+U procedure. The Current column is user defined and the Suggested column is calculated by the software, based on user-defined parameters and past consumption.
Reviewed	Record the date the figures were reviewed.

See Annex 5 for details on the **Calc** button. This button gives access to a screen for calculating reorder quantities.

Table 4-6. Formulary Status Terms

Term	Description
Institution Provincial	Check the appropriate box to signify whether the product belongs to the institution, provincial, or national EML.
National	The level of prescriber permitted to prescribe the item can be defined as well. Setting a prescriber level also includes all of the levels above it in RxSolution.
VEN	Products are classified according to their importance in treating common conditions in a community—V means vital, E means essential, and N means nonessential.
ABC	An item's ABC classification indicates the relative proportion of cost it accounts for among the products stocked based on requisition issues.

Reorder Status Field



Products can be reordered automatically, manually, or according to the budget specified for the particular product. Table 4-7 describes the reorder options shown above.

Table 4-7. Product Reorder Options

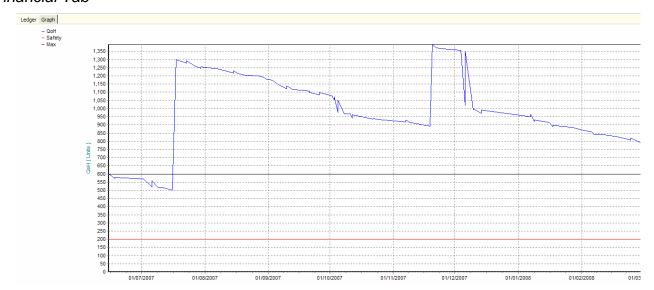
Reorder Option	Description
Automatic	When products are reordered automatically, the projected quantity must be lower than the minimum quantity. The difference between the projected and the maximum stock level values determines the quantity that will be needed. When the next order is generated, the product will automatically be added to the order.
	Use Automatic when the consumption of a specific medicine is stable. The history of the medicine usage is used to determine the stock levels automatically. Nevertheless, the reorder level suggested by RxSolution still needs to be reviewed carefully.
	If a medicine has not been issued at least three times, RxSolution would not have enough history of consumption and, therefore, could not accurately order this medicine automatically. The procurement and lead times must also be set to enable the stock levels to be calculated.
Manual	The product will be added onto an order manually.
	Note: If this setting is selected, even if the quantity on hand falls below the minimum quantity required, no order will be automatically generated for this product.
	A calculating tool has been provided to assist you with the manual ordering of products. See "How Do I Recalculate Minimum, Maximum, and Safety Stock Levels?" on page 4-21 for further information.
Budget	Reordering is driven by budget availability. Even though reorder levels may be high, the balance of available budget influences the amounts to be purchased. The reordering is therefore determined by whether there is enough money in the budget to purchase the required amount.

Stock Ledger Tab



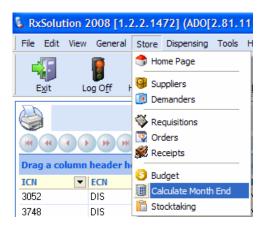
The **Stock Ledger** tab summarizes transactions for an item. The product ledger details can be filtered by selecting **Show All**, **Issued**, **Variance**, **Ordered**, or **Received**, as well as by date. If the Batch management driven option was selected in System Settings the expiry dates and batch numbers of the items are also displayed. This information can be viewed as a graph that plots on-hand, safety, and maximum stocks. Click on **Stock Ledger** and choose **Graph**, and the stock ledger will be displayed as a linear graph.

Financial Tab



The **Financial** section provides information that can be used to compare receipt expenditures against issues. This information can be shown in either graph (shown here) or ledger format. A month-end procedure is used to generate the values in the ledger.

This procedure can also be run during the following month. It is not dependent on the date it is run, but should be run promptly after the end of the month for maximum usefulness. Select **Calculate Month End** on the **Store** drop-down menu at the end of the month to capture the transactions for the month.



Select the **Month** and **Year**. Click on **Proceed**

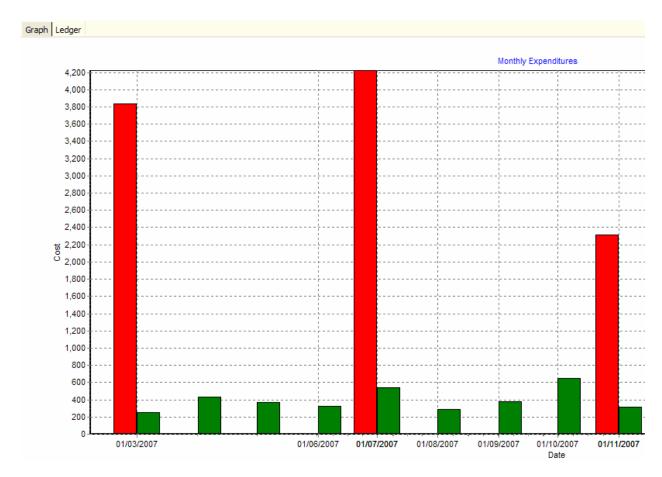


To view ledger information, select the **Ledger** tab.



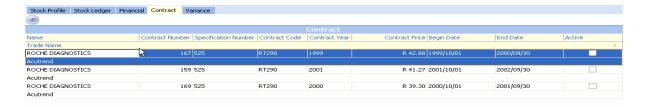
I = Issues and R = Receipts. The total quantities and values for the month and year are displayed.

To see the results graphically, click on the **Graph** tab Graph



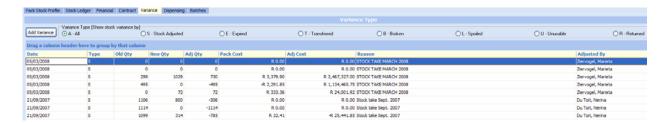
The red columns represent receipt costs and the green columns represent costs of issues to demanders. The value is in currency. This graph is a very good indicator of frequency of orders compared to issues.

Contract Tab



To view supplier contract information for a product, click on the **Contract** tab. This information is created in the Tender module.

Variance Tab



The **Variance** tab is used to see past stock adjustments or to make an adjustment to the stock on hand. Note: The variance procedure adjusts stock for a specific batch number and expiry date. Only the adjusted quantity for a specific batch number and expiry date is changed. For an adjustment for all batches and expiry dates for an item, the stock-take procedure should be used.

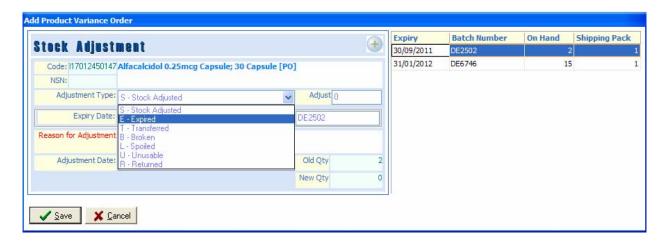
Click the **Add Variance** button to enter an adjustment. The adjustment types are a straightforward adjustment; expired stock write-off; transfer; broken, spoiled, or unusable for some reason; and returned. Performing a variance does not affect the item's purchase or sale price in any way. *The return type adjustment is used to return stock to the supplier*.

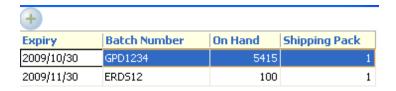
How Do I Adjust the Quantity of Stock on Hand for Expired or unusable/broken stock?

To adjust stock on hand to correct stock on hand anomalies, perform a stock take as described in Chapter 5.

To make an adjustment, click on the **Add Variance** button adjustment type from the drop-down list.

Click on the appropriate batch and expiry date to select it .(Note: This is not required if the system has not been selected as batch driven.) If the batch/expiry date does not exist ,click on the plus button and enter the new batch and expiry values.





Enter the adjustment quantity. A minus (–) is used if subtracting from stock. Also enter a detailed reason or reference. In the example below, 1,000 packs are being written off because of flood damage.



Click on the **Save** button to confirm the transaction.

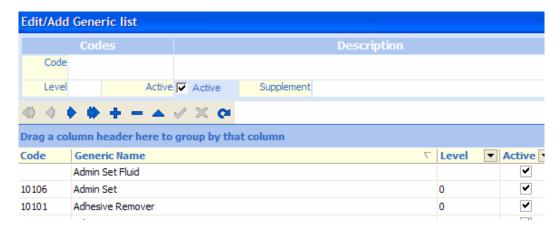
Dispensing Tab



This tab displays the information that is required to make available an item for dispensing in the prescription procedure. If any of the variables below are not complete, then the check mark in the **Is Available For Dispensing** box will be absent, and the item cannot be dispensed. You will then need to revisit the product setup and ensure that all details are available for the item.



Check that the Generic name is available in the drop down list. If Not, click in the green + Generic Name Albendazole and add the Generic Name I.e.



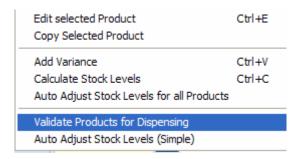
Click on the ** and add the Generic Name with the next available self determined code.

Save by clicking on the .

In a similar fashion, check the other product setup tables. Note, a route must be indicated.

To revalidate that the product is available to dispense, run the Validate Products for

Dispensing option, found under the Edit button ... Note: The check mark for **Is Available For Dispensing** is not an editable field; the system enters the check mark if all the dispensing criteria are met. If the box is not marked and you believe it should be, please review the strength and form on the product setup.



The **Label Information** panel under this tab provides detail about how the product will be displayed on the patient label.

The option allows the user to mark whether the item should be handled as a unit or dispensed by the SKU (Smallest Known Unit) when dispensing. For example, if the item is a vial of insulin, one would normally issue the whole vial to the patient: thus, one would not add place a check mark in this box. If the item is a bottle of 1,000 tablets and one does not normally issue 1,000 tablets to a patient, then one would place a check mark in the box so that when dispensing the calculated quantity is displayed in the to-dispense quantity and not as 1,000.



Batches Tab



The **Batches** tab displays all of the batches of an item that are in stock based on receipts. It also shows the shipping pack size in which the product was received. Note: Items on hold are not deducted here.

How Do I Create a New Product?

A new product can be created in two ways—

- Create an item from new.
- Copy an item of similar setup and modify the product information for the new item. For example, you have paracetamol 500 mg tablets 1,000s and would like to add paracetamol 500 mg tablets 5,000s. You can copy the 1,000s and insert the new item's codes and pack size.

Creating an Item from New

1. On the main product catalog screen, click on the insert icon .



2. This action will open the **Add new product...** window.



Fill in the details of the product. For an explanation of each of the sections see the "How Do I Access a Detailed Description of a Particular Product?" section earlier in this chapter. If any of the item's details is not in the system settings table, you can add it by clicking on the appropriate plus sign and next to the entry to be added. Make sure that all details are filled in, or the product will not be marked as available for dispensing.

- 3. Click on **Save** to add the product.
- 4. The product will be added to the list of products in RxSolution.

Note: For details on creating items such as insulin or eye drops, see Annex 4. The units for these types of items can be difficult to set up correctly.

Creating an Item by Copying an Existing Item

- 1. Select the item to copy.
- 2. Click on the edit button and choose Copy Selected Product
- 3. Add and change the required parameters and click on **Save**.

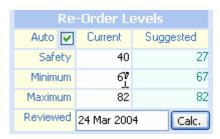
Note: This option may not be available to all users. Use **System Access** to restrict this right to certain users.

How Do I Recalculate Maximum, Minimum, and Safety Stock Levels for an Item?

Click on the edit button and select **Calculate Stock Levels**. This feature allows a more advanced recalculation of stock levels using consumption and actual lead times, taking into account standard deviation of the data.



You may also click on the **Calc.** button on the **Pack Stock Profile** tab. See Annex 5 for more information on this option.



How Do I Globally Recalculate My Maximum, Minimum, and Safety Stock Levels?

Two methods can be used to recalculate these stock levels. The first method calculates the stock levels using the method described in Annex 5, which takes into account standard deviation on consumption.



Stock Levels for all Products. This feature recalculates all stock levels based on the set parameters and consumption for products when the reorder level in the **Re-Order & Formulary** box on the Product Catalog screen is set to **Auto**. See Annex 5 for details.



In the event that you the user has decided to use another formula than the systems formula, this will be set up as a scheduled task in Windows. Contact your RxSolution Consultant to assist

How Do I Search for a Product?

- 1. To find the product you want, click on the **Description** heading on the initial **Product Catalog** screen.
- 2. Simply begin to type the name (or first few letters of it) of the product that you want to find. As the name is typed, the list jumps to the matching record.

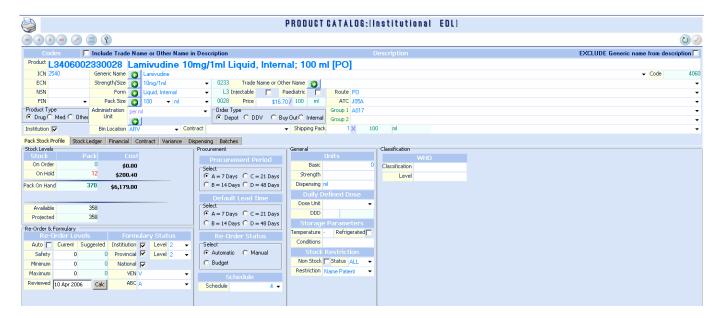
How Do I Edit Information on a Product?

- 1. Click on the product to be edited. The selected product will be highlighted by a blue background.
- 2. Click on the edit product icon

3. The following options are displayed—



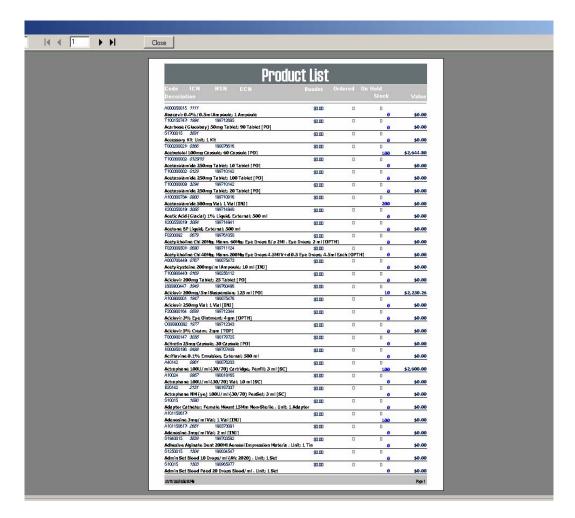
- 4. Select the **Edit selected Product** option.
- 5. This action opens the product detail window (shown below).



- 6. Alternatively, double click on the product to be selected to open the above window.
- 7. Make the desired changes to the product by selecting the fields that need to be edited.
- 8. Click on to save the changes and click on to refresh the list.
- 9. Click on ____ to return to the **Product Catalog** screen.

How Do I Print a List of Products?

- 1. Click on the printer icon on the top left-hand corner of the **Product Catalog** screen.
- 2. A preview of the product list will be displayed, as shown below.



- 3. To print this list, select the printing option to print to an installed printer or to print to a file (a copy of the list will be printed as a file that can be saved on the computer). (See chapter 25, "Reports" for a detailed description of printing to a file.)
- 4. Follow the normal procedure for printing a document.

How Do I Print Product Information Contained on a Tab

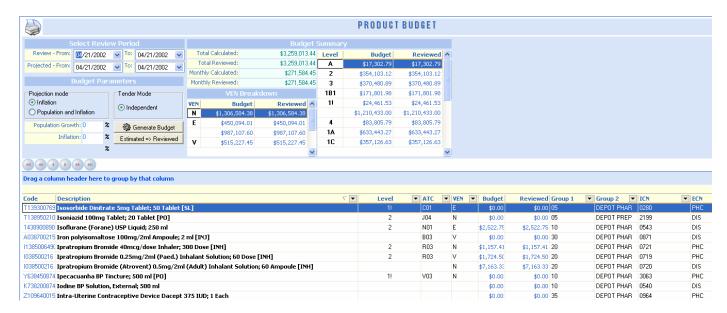
- 1. Select the product whose information is required.
- 2. Click on the tab containing the required information.
- 3. Click on the printer icon



4. Follow the usual procedure to print a document.

How Do I Create a Product-Based Budget in RxSolution?

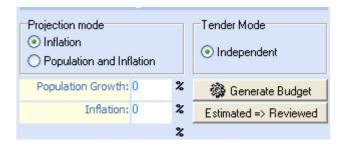
You can use product consumption data from RxSolution to help create a budget for your facility. This process is usually done annually. On the RxSolution main menu, click on **Store** and then **Budget**. The following screen appears—



1. In the **Select Review Period** section (upper left), set the review period dates. These dates are normally for the last financial year. The recommended minimum period is four months and the maximum, two years. Set the projected period dates as well. These are usually for the coming financial year.



2. Set the **Budget Parameters**. For the **Projection mode**, you can choose to enter an inflation factor or both population and inflation factors. Enter the numbers you want to use for **Population Growth** and for **Inflation** percentages. They will be applied to the past consumption figures when you create your budget estimate. Although the simplest method for determining the inflation figure is to use the value suggested by the national treasury or financial director, medicines may not follow the general inflation rate. Hence, the pharmacist should research the percentage inflation in cost of medicines during the last tender cycle.



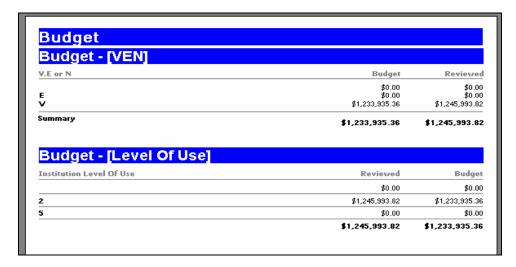
3. Click on the **Generate Budget** button. The **Budget** column in the **Budget Summary** section will be filled in with a figure based on this formula—

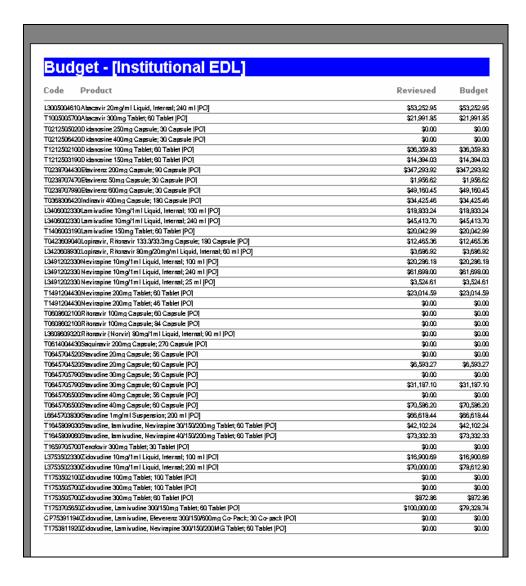
(selected review period consumption quantity) × (latest product price) × (population growth percentage, if applicable) × (inflation percentage, if applicable)

- 4. Click on the **Estimated=>Reviewed** button to copy the estimated quantities to the reviewed column so that you can change them as needed. Make any required changes to the figures in the **Reviewed** column. The figures in this column will be the working budget.
- 5. Click on the refresh button to update the totals in the **Budget Summary** section of the screen. You can see below that the totals are broken down by level and VEN category, for both the budgeted figures and the reviewed figures.



6. You can print the results of your budgeting process by clicking on the printer icon at the top left of the screen. The print preview screen will appear, showing the summary information on the first page of the report and the detail by item on the subsequent pages as shown below.



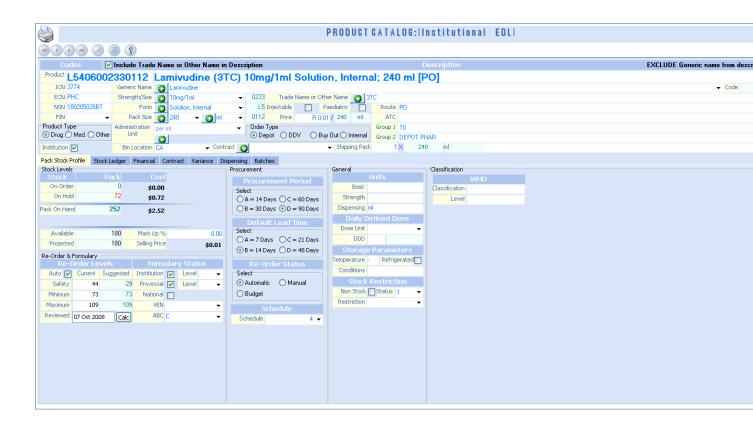


How Do I Create a Product-Based Budget in RxSolution?

Locking a product is a feture of RxSolution. This prevents multiple users issuing the same product at the same time. In the event that a product remains locked due to power Failure or the like, and no transactions can be performed using the product, To Unlock the Prduct:



- 1. Click on the **Products** icon
- 2. Double click on the product required to unlock.
- 3. The following screen format appears—



4. Right Click anywhere in the blue empty area and the following message label will appear



5. Click on the message and the product will be unlocked.