

SIGMED Lite

- **Pharmaceutical Supply Chain Management Tool** -

- **User Guide** -





Table of Contents

1	Introduction.....	8
2	Installing SIGMED LITE	10
2.1	Recommended System Requirements.....	10
2.2	How to install SIGMED Lite	10
3	Getting started.....	14
3.1	Unlocking and login.....	14
3.2	Button bars	18
3.3	Forms	19
3.4	Crystal Reports.....	21
4	Maintenance.....	24
5	Profiling	26
5.1	Tables.....	26
5.1.1	Miscellaneous	26
5.1.2	Products.....	28
5.1.3	Default values	33
5.1.4	Pharmaceutical classification EML	34
5.1.5	Currencies	37
5.2	Functions.....	38
5.2.1	Product items	38
5.2.2	Authorization SIGMED Lite.....	40
5.2.3	Change password	40
5.2.4	Exchange rates	41
5.2.5	Refresh statistics	42
5.2.6	Erase transactions (purchase orders).....	42
6	Procurement	44
6.1	Purchase Order details	44
6.2	List of requirements: order item list.....	45
7	Receipt of goods	52
7.1	Arrival of shipments	52
7.1.1	Supplier’s Invoice	52
7.1.2	Receipt of goods	54
7.1.3	Receipt of goods –submenu View	55
7.2	Receipts: Quality control	63
7.3	Cost price	68
8	Sales.....	74
8.1	Creation of the sales order	75
8.2	Assemble.....	79
8.2.1	Picking list	81
8.2.2	Delivery Note.....	85
8.2.3	Invoicing	86
8.3	Consolidation.....	89

8.4	Return of goods.....	90
9	Warehouse management	98
9.1	Stock control	98
9.2	Stock position.....	110
9.3	Boarding off.....	113
9.3.1	Category: Expired products	113
9.3.2	Category: Other.....	117
10	Commodities	121
10.1	Names	121
10.2	Composition product items	127
10.3	Pricing.....	132
10.4	Product item status.....	137
10.5	Order pack sizes	141
11	External Contacts	143
11.1	Suppliers	143
11.2	Customers	145
12	Management Information.....	147
12.1	Procurement	147
12.1.1	Quantification	148
12.1.2	Status.....	157
12.1.3	Suppliers	158
12.2	Receipts.....	161
12.3	Sales	165
12.3.1	Sales	165
12.3.2	Non-availability	171
12.4	Warehouse management	174
12.4.1	Stock taking	174
12.4.2	Stock adjustments	176
12.4.3	Boarding off.....	177
12.5	Product Items	180
12.5.1	Shelf life.....	180
12.5.2	Stock	183
12.6	Stock movements	185
12.7	ABC Analysis	191
12.8	Tracking and tracing	196

How To...?

2.2	How to install SIGMED Lite	10
4	Maintenance	24
	How to restore a database?	25
5	Profiling	26
	How to create a Customer Type?.....	27
	How to update or delete the Customer Type?.....	27
5.1.4	Pharmaceutical classification EML	34
	How to create a new Therapeutic Group?.....	34
	How to create a new therapeutic sub-group?.....	35
	How to update or delete a Therapeutic (sub-)group?.....	36
5.2	Functions.....	38
	How to delete an exchange rate?	42
	How to erase a transaction (purchase order)?	43
6	Procurement	44
	How to create a List of Requirements?.....	48
	How to modify a List of Requirements?.....	50
	How to add a product item to an existing List of Requirements?.....	50
	How to delete a List of Requirements?.....	50
7	Receipt of goods	52
7.1	Arrival of shipments	52
	How to register a supplier’s invoice?.....	57
	How to register the receipt of a product item?.....	58
	How to modify the supplier’s invoice data?	59
	How to modify the product item receipt data?.....	60
	How to add a product item to an already registered receipt or supplier’s invoice?.....	61
	How to delete a supplier’s invoice?	62
	How to delete a product item from a receipt?.....	62
7.2	Receipts: Quality control	63
	How to reject a receipt?	65
	How to consolidate a receipt?	66
	How to change the status of a purchase – product/supplier level?	67
	How to change the status of a purchase – purchase order level?.....	67
7.3	Cost price	68
	How to calculate the estimated cost price?	72
	How to calculate the real cost price?	72
8	Sales	74
	How to create a sales order of product items?	76
	How to modify or delete a sales order?	78
	How to print a picking list?.....	82
	How to modify a picking list?.....	83
	How to delete a picking list?.....	85
	How to print a Delivery Note?.....	85
	How to modify a Delivery Note?.....	86
	How to delete a Delivery Note?.....	86
	How to print an invoice?.....	88
	How to delete an invoice?.....	88
	How to consolidate a Sales order?	89
	How to consolidate a stock discrepancy - sales order?.....	90

8.4	Return of goods.....	90
	How to create a credit invoice?.....	92
	How to modify a credit invoice?.....	93
	How to delete a product item from a credit invoice?.....	94
	How to add a product item to an existing credit invoice?.....	95
	How to consolidate a credit invoice?	95
	How to consolidate a stock update of a returned product item?	96
9	Warehouse management	98
9.1	Stock control	98
	How to create an annual stock take.....	102
	How to modify an annual stock take.....	104
	How to delete an (annual) stock take	104
	How to delete a product item from an annual stock take.....	104
	How to create a periodical stock take	104
	How to modify a periodical stock take	106
	How to add a product item to an existing periodical stock take	106
	How to delete an annual stock take.....	106
	How to delete a product item from an periodical stock take	106
	How to create a stock adjustment	107
	How to modify a stock adjustment	108
	How to add a product item to an existing stock adjustment	108
	How to delete a stock adjustment	108
	How to delete a product item from a stock adjustment list.....	109
	How to consolidate a stock take / adjustment.....	109
9.2	Stock position.....	110
	How to know the stock position of a product item	112
9.3	Boarding off	113
9.3.1	Category: Expired products	113
	How to list product items that are expired or will expire in the near future?	114
	How to board off expired product items (or product items that will expire in the near future)?	114
	How to modify boarded off expired product items (or product items that will expire in the near future)?	116
	How to add an expired product item (or product item that will expire in the near future) to an existing boarding off transaction?	116
	How to delete a product item from the boarded off (expired) product item list?	116
9.3.2	Category: Other.....	117
	How to board off product items (category: other)?	117
	How to modify boarded off product items (category: other)?	118
	How to add a product item (category: other) to an existing boarding off transaction?	119
	How to delete a product item from the boarded off (category: other) product item list?.....	119
	How to consolidate a boarding off transaction?	119
10	Commodities	121
10.1	Names	121
	How to link a new product name to a Therapeutic Group?	124
	How to undo the link Commodity Name – Therapeutic Group?.....	125
10.2	Composition product items	127
	How to create a product item?	127

	How to modify a product item?	130
	How to delete a product item?	131
10.3	Pricing	132
	How to price a product item?.....	133
	How to modify a price?.....	134
	How to delete a price?.....	135
	How to print the product price change?.....	136
10.4	Product item status	137
	How to change the status of a product item?	139
	How to modify the status of a product item?.....	140
	How to delete a status change entry of a product item?	140
	How to view a status change history of a product item?	140
10.5	Order pack sizes	141
	How to create an order pack size	141
	How to modify an order pack size of a product item:.....	142
	How to delete an order pack size of a product item:.....	142
11	External Contacts	143
11.1	Suppliers	143
	How to create a supplier?.....	144
	How to modify a supplier?.....	144
	How to delete a supplier?.....	144
11.2	Customers	145
	How to create a customer?.....	145
	How to modify a customer?.....	145
	How to delete a customer?.....	146
12	Management Information.....	147
12.1	Procurement	147
12.1.1	Quantification	148
	How to determine the Theoretical Re-Order Level of a product item?	151
	How to enter the Re-Order Level of a product item?	151
	How to list the stock level of product items?.....	153
	How to list the stock-out level of product items?	154
	How to determine the effect of LT, OL, shipments, etc, on Stock Levels?... 156	
	How to list the procurement status of a product item?	157
12.1.3	Suppliers	158
	How to list delivered product items and their purchase price of a supplier?. 158	
	How to list all suppliers, purchase and cost prices of a product item?	159
12.2	Receipts.....	161
	How to list the receipts for a defined period or Financial Year?	163
	How to list the receipt discrepancies for a defined period or Financial Year?	
	164
12.3	Sales	165
12.3.1	Sales	165
	How to list all the sales for a defined period?.....	170
	How to list the monthly consumption of the product items?.....	171
	How to list the monthly demand of the product items per customer?	171
12.3.2	Non-availability	171
	How to list the lost sales, due to stock-outs and/or rationing, for a defined period?.....	173
12.4	Warehouse management	174
	How to list the stock takes for a defined period?.....	175

How to list the stock adjustments for a defined period?	176
How to list the boarded off products for a defined period?	178
12.5 Product Items	180
How to list the remaining shelf-life of the stock?	182
How to list the stock position?	184
12.6 Stock movements	185
How to list/print the stock movement?	190
12.7 ABC Analysis	191
How to exclude a product item from the ABC analysis?	193
How to make a product item part of the ABC analysis?	194
How to perform the ABC analysis?	194
How to list the ABC class status of a product item?	194
12.8 Tracking and tracing	196
How to perform tracking and tracing?	197

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1 Introduction

SIGMED Lite is a computerized drug management information system for Health Facilities and Pharmacies. It encompasses all functions of supply chain management. These include: forecasting and planning, procurement and purchasing, warehousing, inventory management and sales.

SIGMED Lite is not designed to operate in a client-server environment; the database will be located on the computer where you install SIGMED Lite.

This LITE version is derived from SIGMED, the drug management information system for Medical Stores (www.medict.nl).

This manual describes the functions of SIGMED Lite. Chapter 2 explains how to install SIGMED Lite on your computer. In Chapter 3 we explain the how to unlock the demonstration version and how to use SIGMED Lite. In this “Getting Started” chapter we describe how to navigate through the program. Chapter 4 explains the maintenance operations of the system. Before you can use the logistic modules of SIGMED Lite (procurement, receipt, distribution, management information) the system needs to be feed with data of your organization (e.g products, suppliers, patients). This parameterization of SIGMED Lite is described in the chapter 5 “Profiling”.

MedICT can provide support in setting up SIGMED Lite for your organization. Contact us for more details.

The remaining chapters contain an overview of SIGMED Lite’s logistic modules:

Chapter 6. Procurement. This chapter describes the difference phases of the procurement process.

Chapter 7. Receipts. This chapter describes the process of receipt of goods. It is the beginning of the pipeline. Important parameters, such as batch number and expiry date are registered.

Chapter 8. Sales. This chapter describes sales process, being the end of the pipeline. Also the return of goods is discussed.

Chapter 9. Warehouse management. This chapter describes important processes like inventory control, stock adjustments and boarding off of stock

Chapter 10. Commodities. This chapter discusses how you create product items. Moreover, it describes the pricing of product items.

Chapter 11. External contacts. This chapter describes the external contacts: suppliers and customers. It discusses how to create, delete and update your contacts. Also budgets and credit ceilings of customers are discussed.

Chapter 12. Management Information. This chapter describes the Management Information based on aggregated data of the important business processes like procurement, receipts, warehouse management and sales. Moreover, this module

contains some special features: stock movements, ABC analysis and tracking and tracing.

Each chapter starts with a general description of the module, illustrated by screenshots. The second part deals with the so-called “How to...?” questions. Step by step the user is guided to perform a transaction (create, delete, update, review).

SIGMED Lite is distributed with some base data and a purchase order. Please note that this data is used for demonstration purpose only. They do not reflect a real situation. MedICT can support you in profiling SIGMED Lite.

For questions about SIGMED Lite, contact:

Gert Kaasschieter
MedICT BV
Agro Business Park 67
6708 SR Wageningen
The Netherlands

Phone: + 31 317 471 355

Fax: + 31 317 471 373

Email: info@medict.nl

2 Installing SIGMED LITE

2.1 Recommended System Requirements

The following resources are recommended for use with SIGMED Lite:

CPU	Pentium III (or higher) or equivalent
Operating system	Windows 98, ME, 2000, NT4 (service pack 6 or later), XP (home / pro edition)
Memory	32 MB
Hard drive space	100 MB
Screen resolution	800x600 pixels

Minimal computer skills and an understanding of Microsoft Windows and Microsoft Excel are needed. We assume that you are already familiar with Windows terms such as icon, application, window, click, double-click, select, choose and menu. If you are relatively new to Windows, you may wish to review your *Microsoft Windows User's Guide* before you begin.

SIGMED Lite is not designed to operate in a client-server environment; it is a stand-alone program. This LITE version is derived from SIGMED, the drug management information system for Medical Stores. SIGMED is a client-server application (www.medict.nl).

2.2 How to install SIGMED Lite

SIGMED Lite is distributed as free-trial version for a period of 30 days. You experience all the features of SIGMED Lite during this period.

From CD

To install this release of SIGMED Lite, insert the CD in your CD-ROM drive. The installation of FoCaMed will start automatically. Follow the on-screen instructions (Fig. 2.1 – 2.3).

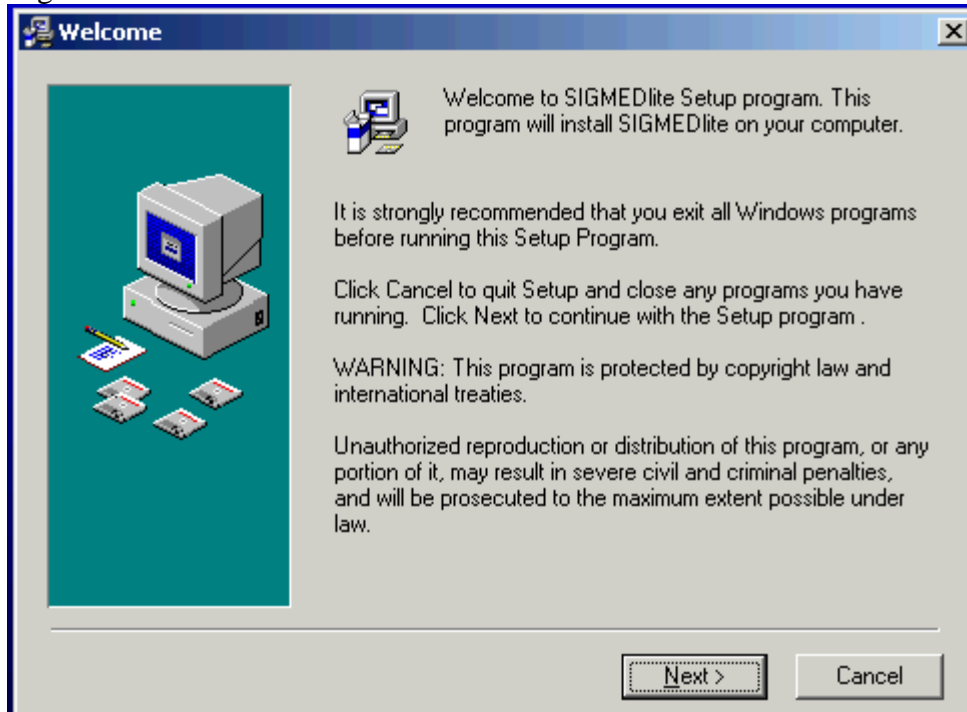
To start the installation manually:

1. Open Explorer and go to the directory of the CD-ROM.
2. Double click the file SIGMEDLite.exe.
3. Follow the instructions (Fig. 2.1 – 2.3).

Downloaded from www.medict.nl

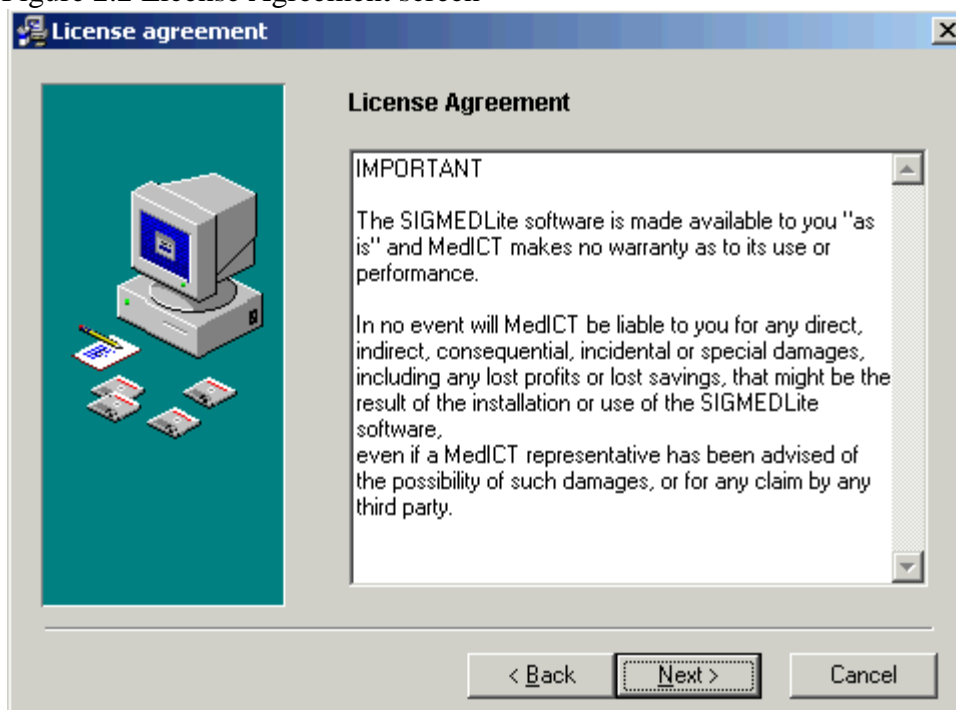
1. Go to the map where you stored the download.
2. Unzip SIGMEDLite.zip
3. Click on SIGMEDLite.exe and follow the on-screen instructions (Fig. 2.1 – 2.3)

Figure 2.1 Welcome screen



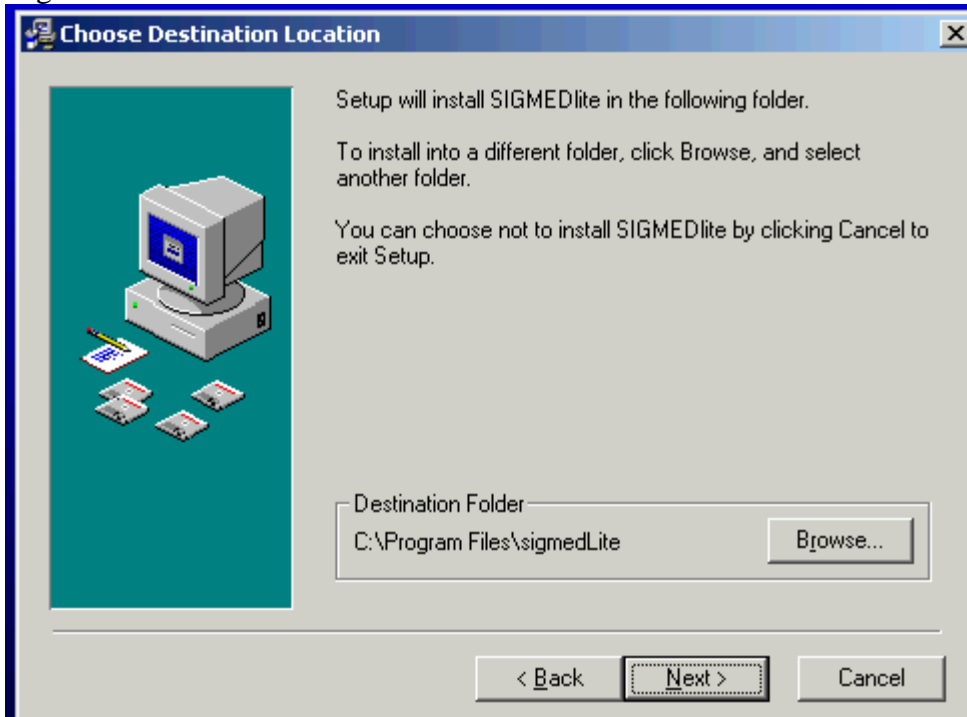
4. Click on **Next** to continue.

Figure 2.2 License Agreement screen



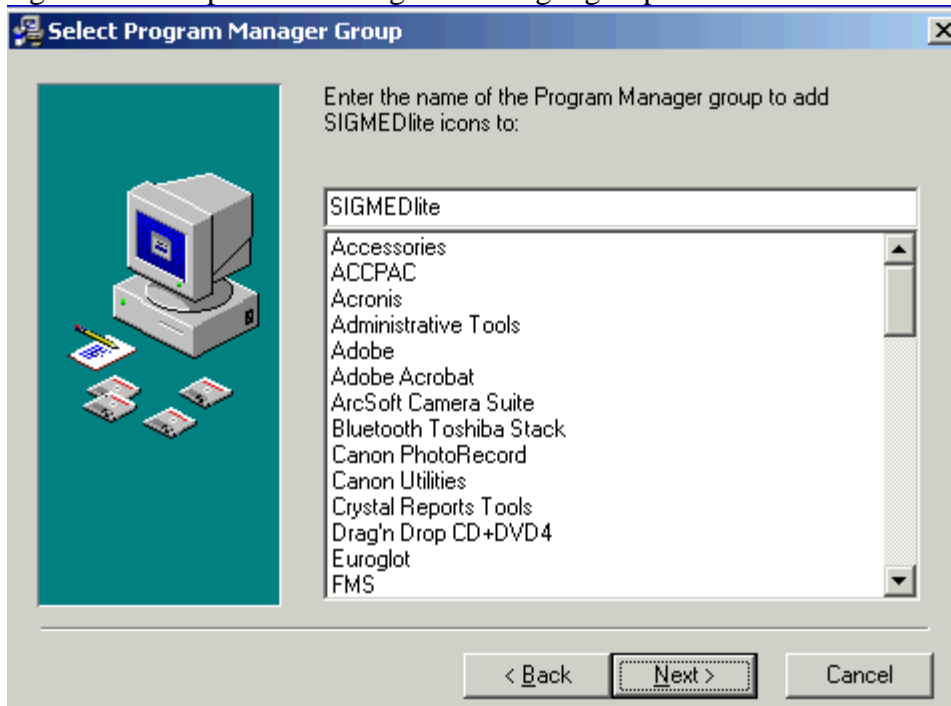
5. If you agree with the License Agreement click on **Next** to continue

Figure 2.3 Destination Folder screen



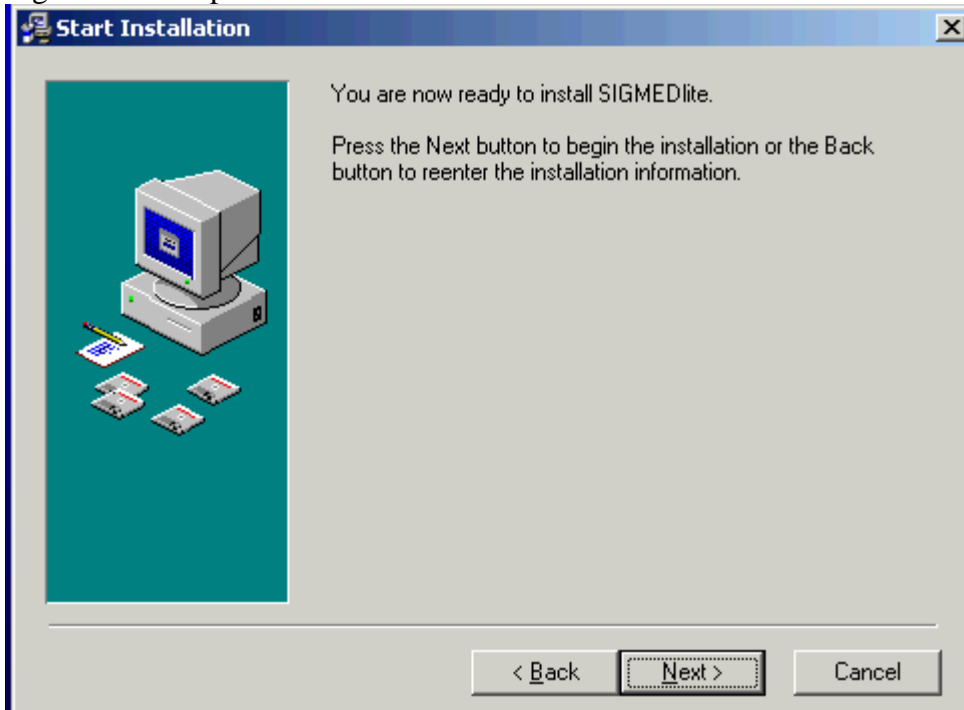
Click on **Next** if you want to install SIGMED Lite in C:\Program Files (=default folder). Click **Browse** if you want to install SIGMED Lite in another folder.

Figure 2.4 Set up screen – Program Manager group



6. Click **Next** to continue.

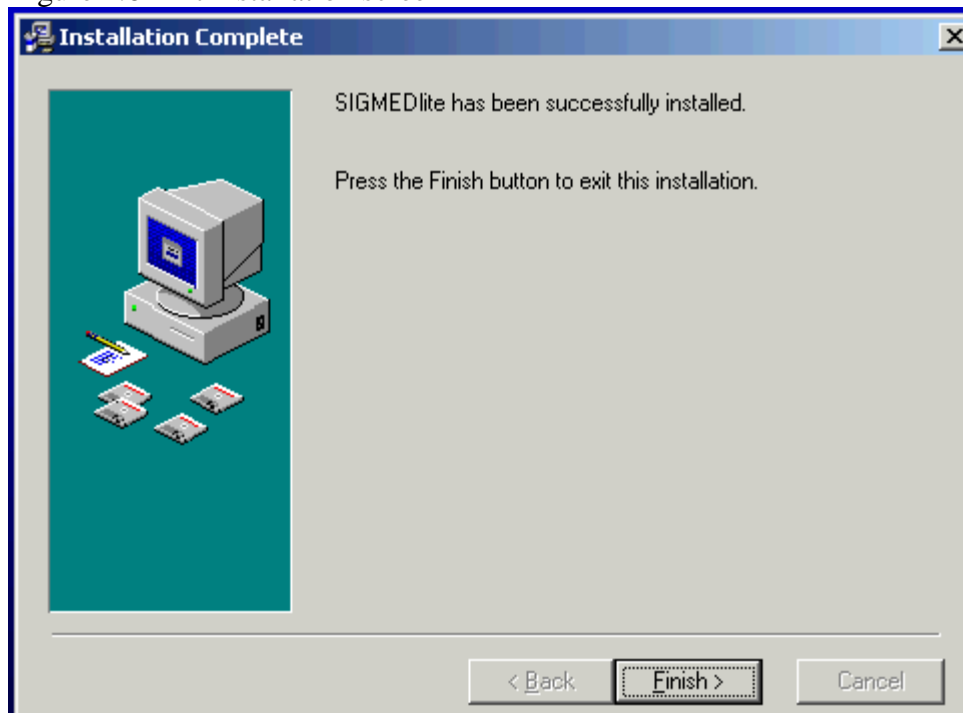
Figure 2.5 Set up screen



7. Click on **Next** to continue.

When the installation is complete the following window is displayed:

Figure 2.6 Exit installation screen



8. Click on **Finish** to close the window

Consult Chapter 3 (Getting Started) and Chapter 5 (Profiling) before using SIGMED Lite.

3 Getting started

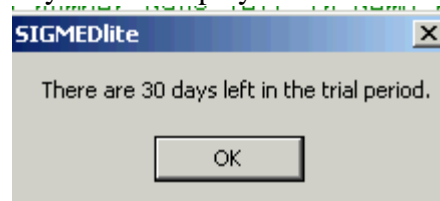
This Chapter explains you how unlock the trial version and how to navigate through SIGMED Lite; what type of information is displayed and how to make database transactions like Create, Update, Delete and Print.

3.1 Unlocking and login

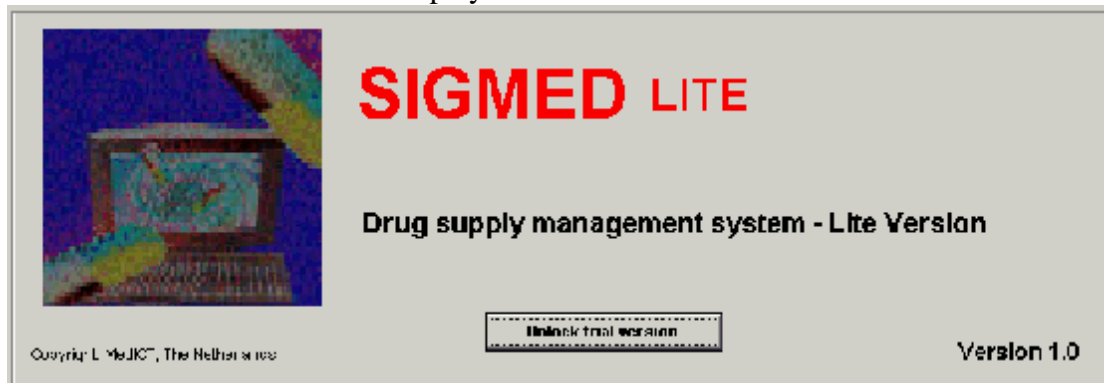
After SIGMED Lite is installed on your computer, you can start the program from the Windows Taskbar:

1. Click on **Start**
2. Click on **Programs**
3. Locate and click on **SIGMED Lite**

SIGMED Lite is distributed as free-trial version for a period of 30 days. You experience all the features of SIGMED Lite during this period. After starting the trial version the number of days left is displayed:

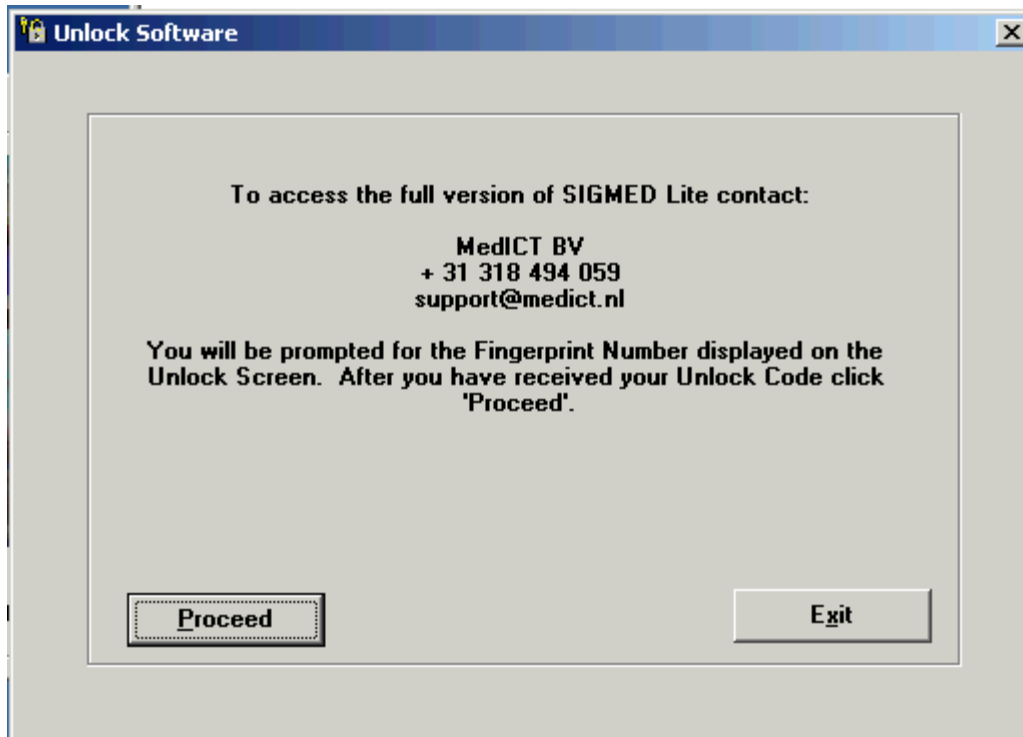


This starts SIGMED Lite and displays the *Welcome* screen:

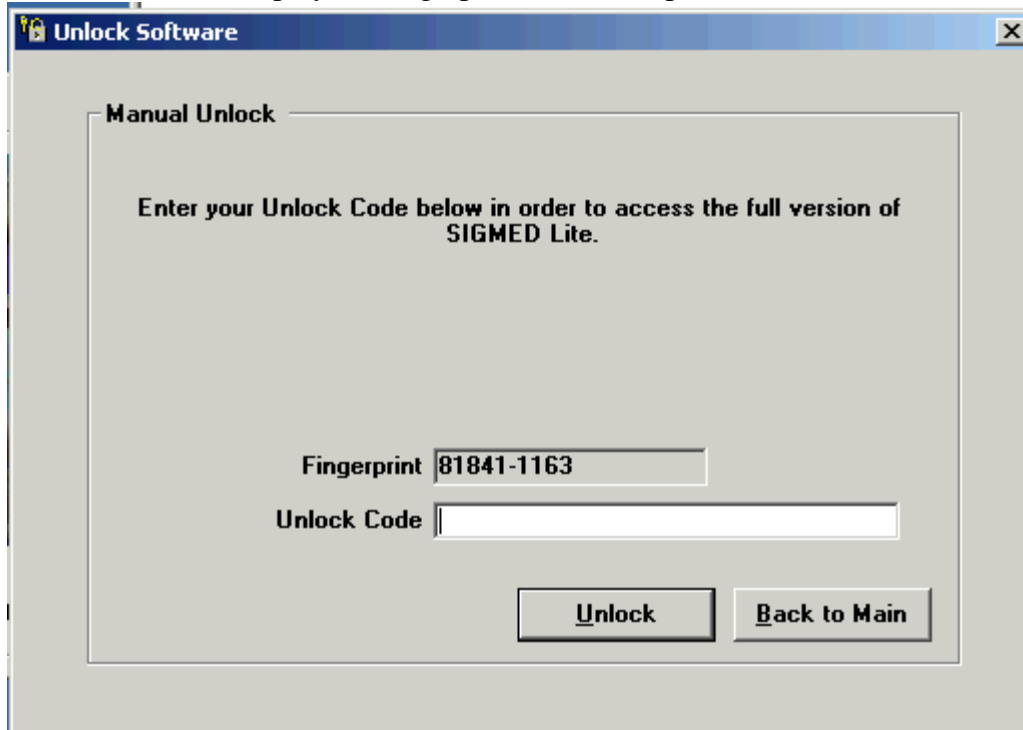


The 30-days free-trial period is lifted by a unlock code. MedICT will issue this code after receipt of the payment. This unlock code is based on the fingerprint of the PC on which SIGMED Lite is installed.

The fingerprint of the computer is found by clicking the **Unlock trial version** button. The following form appears:



Click **Proceed** to display the fingerprint of the computer:



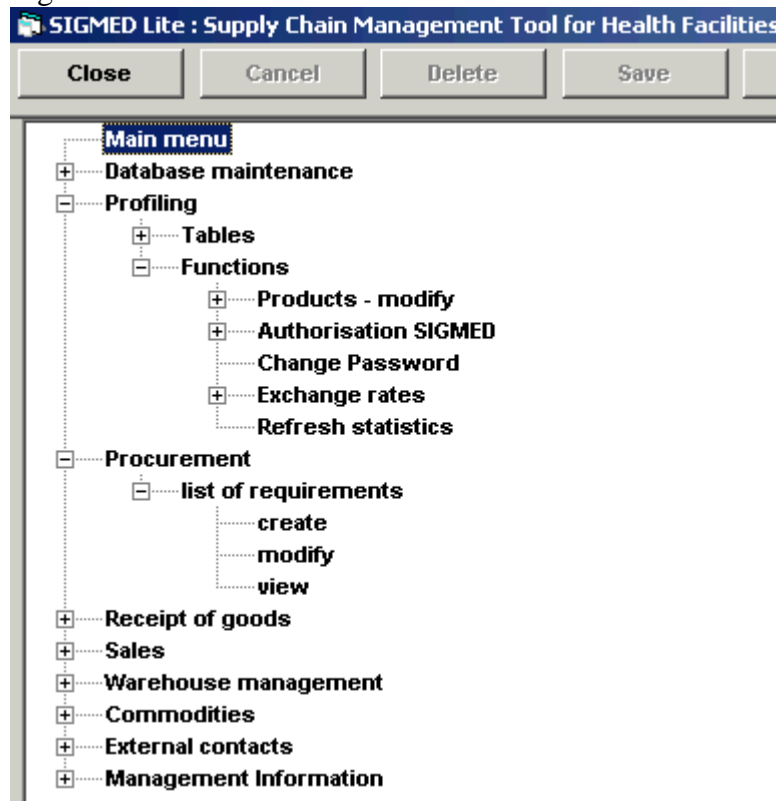
In the above example the fingerprint is 81841-1163. Send this fingerprint to support@medict.nl and after receipt of the payment you will be issued the unlock code. Enter this code in the field <Unlock Code> and click **Unlock**.

Click the *Welcome* screen to display the logon form (Figure 3.1). You can also create a shortcut of the program on the Windows desktop and start SIGMED Lite by double-clicking the icon.

Figure 3.1 Logon form SIGMED Lite

Fill in your username and password and click the <OK> button to open the main menu (Fig. 3.2). The password is displayed with asterisks (*).

Figure 3.2 Main Menu SIGMED Lite



Two types of users are defined in SIGMED Lite: an user with system administration grants (username: **sa**, password: **sa**) and an user with view grants only (username: **sb**, password: **sb**). After installation you can log on to the system as User **sa** or User **sb**. It is recommended to change the username and password of the two predefined users after installation of the software.

Users with system administrator grants can add new users (see Chapter 5.2.2) and are granted to conduct “create”, “modify” and “delete” database transactions.

SIGMED Lite's menu tree is a quick and easy way to navigate through the program. To use the menu tree:

- Click on the plus (+) sign next to any option to expand another submenu
- Click on the option you need to display its data form.
- Click on the minus (-) sign next to any option to collapse the submenu

Before using the logistic modules of SIGMED Lite define first the base currency and local currency (see chapter 5). Explore the default settings also and make changes if required (e.g. financial year). The table with the default settings is accessible through the menu option <Profiling → Tables → default values>.

3.2 Button bars

Each data form comprises a top menu button bar (Fig. 3.3) and a bottom bar (Fig. 3.4).

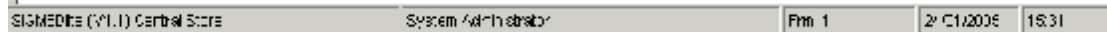
Figure 3.3 Top menu button bar



Buttons are enabled (e.g. Delete) or disabled (e.g. Save). If enabled, the respective transaction can be invoked by a mouse-click.

Top Button	Description
Close	Closes the active form and/or SIGMED Lite.
Cancel	Cancels the changes made. Already saved changes cannot be cancelled anymore.
Delete	Deletes data of the active form.
Save	Saves data of the active form. After “save” all fields are locked.
Update	Changes of the data fields can be made. This action unlocks all relevant fields and enables the existing buttons of the form.
Insert	This action makes it possible to enter new data. All relevant fields become empty (blank) and unlocked.
Print	Prints a report of the current form, which opens in Crystal Reports viewer
Help	Displays the help file

Figure 3.4 Bottom bar



The following information is displayed:

- Current release of SIGMED Lite (e.g. V1.1)
- The user name: “System Administrator”
- The number of the form (e.g. Frm 1)
- Date and time

The forms are numerated. In case of problems, the number displayed in the bottom button bar will help to trace down the anomaly.

3.3 Forms

The user-interface of SIGMED Lite (screens, windows) constitutes *forms*: data forms, pop-up forms.


In most cases a data form constitutes two parts: **data fields** with detailed information and **data tables** (Fig. 3.5).

Figure 3.5 Data form (see chapter 10.5)

Supplier	Pack size	Order pack size	Pack price
Africa Commercial Agency	pack 1 unit	1 unit	USD 12.500
Central Medical Stores	pack 1 unit	1 unit	USD 16.850

The data **fields** contain relevant specific information. When saving the form, the fields are re-locked and grey-coloured. By mouse-clicking the top menu button bar buttons “Update” or “Insert” the relevant data fields are unlocked, which is indicated by their white background colour.

In a **data table** all relevant data is summarized. In the example of Figure 3.5 the form comprises two tables. The top data table contains for example all product items while the bottom data table contains detailed information about the selected product item. The function of the form of Figure 3.5 is to update order pack size prices. All pack sizes of *ABX Miniclean – bottle 500 ml* are listed in the bottom data table; the selected pack size data of the active line is shown in the fields *Supplier*, *Order pack size*, *Currency* and *Price order pack*.

Clicking the button  opens a list box from which a selection should be made (Fig 3.6). To use a list box: double-click the item you want to select or single-click the item to deselect.

The content of these list boxes originates in most cases from the base tables.

Figure 3.6 Pull-down menu: list box



The screenshot shows a form with several fields. The 'Currency' field has a dropdown menu open, showing a list of currency codes: EUR, FCFA, MK, and USD. The 'USD' option is currently selected and highlighted in blue. Other fields visible include 'Price order pack', 'Order pack sizes', and 'Product'.

In some cases extra buttons are available on the form. By mouse-clicking the button a new form will be opened.



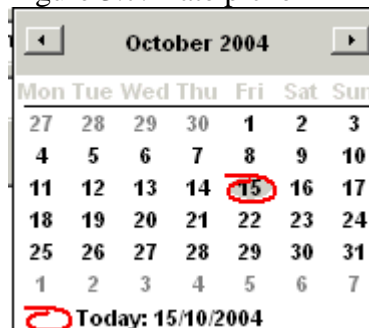
Dates are entered by means of a date picker control (Fig. 3.7), which is opened by clicking the  button of the list box **Date** .



Figure 3.7. Date picker



The screenshot shows a date picker calendar for October 2004. The calendar grid displays days from 1 to 31. The date 15 is circled in red. Below the calendar, it says 'Today: 15/10/2004' with a red circle around the word 'Today'.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Today: 15/10/2004

Navigation through the year is done by clicking the  (backwards) and  (forwards) button. Clicking the date closes the date picker and the selected date is visible in the data field.

The “Search...” button is often present in the forms. A pop-up form opens where the user can fill in the search criteria (Fig 3.8).

Figure 3.8 Search form “Product Items”







SIGMED Lite applies a full text search where “xxx” is treated like “xxx*”. Search on the product name “Aba” gives all items, which start with “Aba” (e.g. Abacavir - 300 mg - 60 caps, Abacavir - 200 mg - 60 caps). The button Cancel of empties the search string. In this case all records will be listed.

3.4 Crystal Reports

SIGMED Lite uses Crystal Reports as report generator. Reports are invoked by clicking the <Print...> button of the top menu button bar. Reports appear in the preview mode. The report name, and the menu bar are visible (Fig. 3.8).

Figure 3.8 Crystal Reports menu bar

The menu bar offers a lot of functionality. It comprises:

-  = refresh the report
-  = zoom
-  = go to first page
-  = go to previous page
-  = go to next page
-  = go to last page


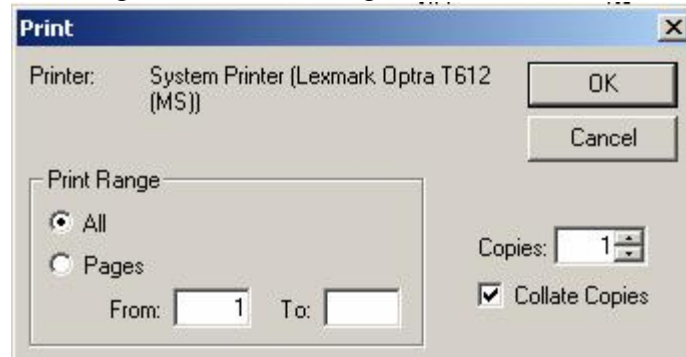

When clicking the  (= print) button the print dialog screen opens (Fig. 3.9).

Figure 3.9 Print dialog screen



The default printer is shown. The user can enter the print range and the number of copies.

The  button is for exporting the report to other file formats like MS Word, MS Excel and pdf.

After clicking the button the export dialog screen appears (Fig. 3.10). In the screen the user should select the desired format. After clicking the **OK** button the export folder dialog screen opens (Fig. 3.11).

Figure 3.10 Export dialog screen

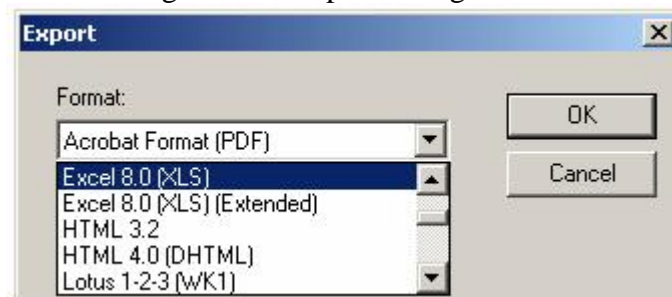
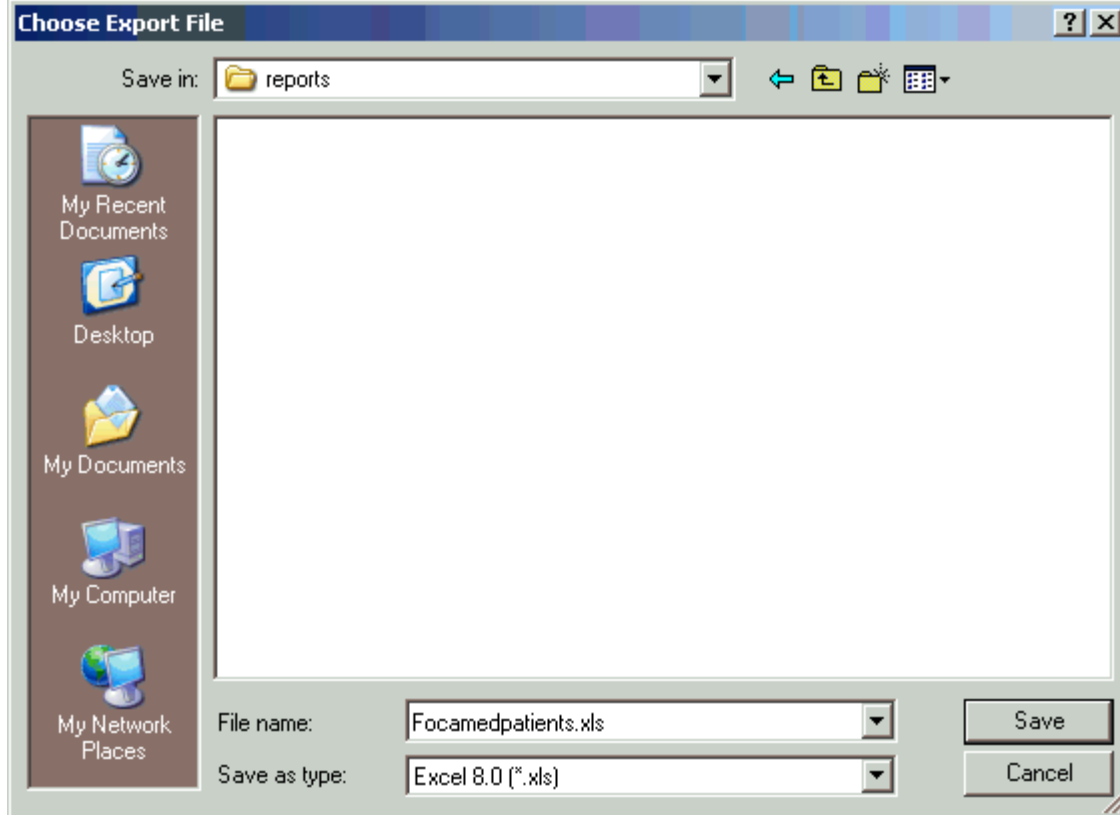


Figure 3.11 Export folder dialog screen



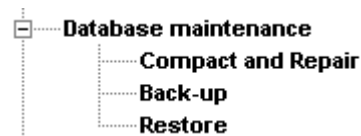
The user is able to select the folder and re-name the report file.

4 Maintenance

SIGMED Lite requires relatively little maintenance. The data is stored in a Microsoft Access database.

Microsoft Access standard “Compact and Repair” en “Back-up” functions are incorporated in SIGMED Lite.

Figure 4.1 Menu option Maintenance



Maintenance of the database is made through the Menu Option **Maintenance - Compact and Repair**. Select this option when performance is slowing down.

Database back-ups should be made at regular intervals. The back-ups are stored in the folder `..\database\backup` of the application map. When the back-up has been created, SIGMED Lite shows the following message:

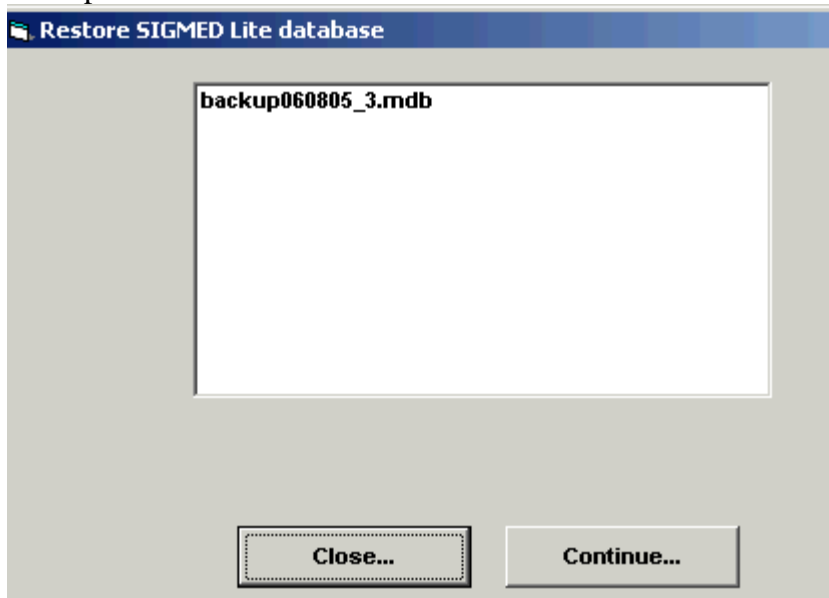
Figure 4.2. Database Back-Up



The name of the back-up constitutes: *backup*+ creation date + sequence number *.mdb*. In the above screenshot indicates that a backup of SIGMED Lite has been made on the 8th of June 2005.

How to restore a database?

1. Select Menu Option <Database maintenance – restore> to list the available backups.



Note that the format of the creation date is *mmddyy*:

2. Select the database and click **Continue...**Confirm the selection.

5 Profiling

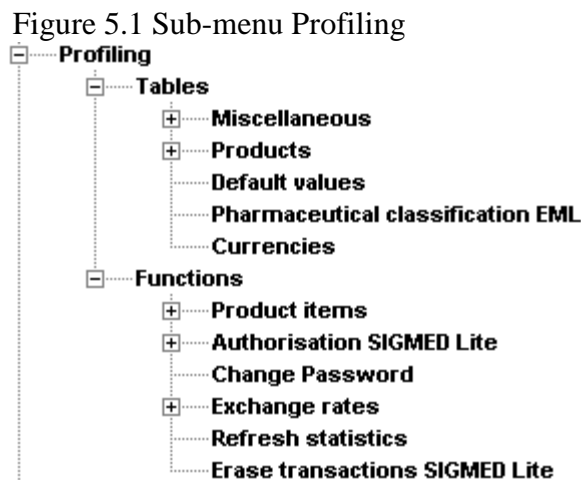
Before you can use the logistic modules of SIGMED Lite (procurement, receipt, distribution, management information) the system needs to be feed with data of your organisation (e.g products, suppliers, patients). This parameterization of SIGMED Lite is described in the chapter “Profiling”.

SIGMED Lite is distributed with some base data and with data of a fictive purchase order. Please note that this data is used for demonstration purpose only. They do not reflect a real situation. MedICT can support you in profiling SIGMED Lite.

The demonstration purchase order can be removed through the menu option <Profiling -> Functions -> Erase transactions SIGMED Lite>.

Data entry in SIGMED Lite has been minimized as much as possible by the use of list boxes. These list boxes are populated with data stored in base *tables*. These tables are accessed through the Menu Option <Profiling → Tables> (Fig. 5.1).

Moreover, this menu option also allows you to use *functions* like creating users, changing passwords, updating exchange rates and refreshing the statistics.



5.1 Tables

SIGMED Lite frequently uses pull down menus, which enables you to select items from a list. These lists are linked to database tables, which are updated via the Menu Option <Profiling - Tables>.

5.1.1 Miscellaneous

Under this submenu the remaining base tables are located. The following entities are involved:

- Countries
- Cities (customers)
- Regions
- Districts

- Reasons boarding off (e.g. Quality control, breakage, expired)
- Procurement: discrepancies receipt (e.g. damaged, missing)
- Type of customer

The mode of data entry, updates and deletes is similar for all entities and will be explained for the entity “Type of customer”.

In SIGMED Lite the customers are classified according to **types** (e.g. NGO, Government). These types of customers should be defined first.

How to create a Customer Type?

3. Select Menu Option **Profiling–Tables – Customers** and click on the **Insert** button of the top menu button bar to open the data input screen.

Type of customer	
Central Hospitals	
CMS	
District Assemblies	
District Health Organisations	
Hospitals & Health Centres	

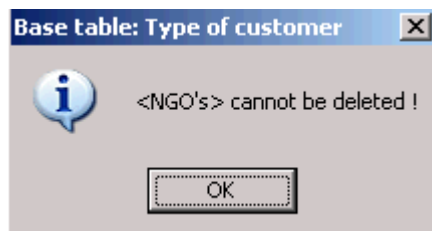
Type

4. Enter the name of the Customer Type and click **Continue** to save the entry in the database or click **Cancel** to undo the transaction. The input screen is closed and the result is visible in the data screen.

How to update or delete the Customer Type?

5. Select Menu Option **Profiling –Tables – Customers**.
6. Select the name in the table you want to change and click on the **Update** button of the top menu button bar to open the data input screen. See step 2.
7. If you want to delete the Health Facility Type select the name in the table and click on the **Delete** button of the top menu button bar.

If the Customer type has been used, the following message appears:



5.1.2 Products

SIGMED Lite applies the following naming conventions for the commodities:

$$\text{Product Item} = \text{generic name (INN)} + \text{formulation} \quad (1)$$

For the formulation three options are available (see Fig 4.8):

Option I: formulation = strength + dosage form + presentation

Option II: formulation = dosage form + strength + presentation

Option III: formulation = strength + presentation

Example I

product name: Acetazolamine
 dosage form: tablet (abbreviation: tab)
 strength: 250 mg (as sulphate)
 presentation: -

Formulation product item:

Option I Acetazolamine - 250 mg - tab
 Option II Acetazolamine - tab - 250 mg
 Option III Acetazolamine - 250 mg

Example II

product name: Nevirapine
 dosage form: oral suspension (abbreviation: osu)
 strength: 50 mg / 5 ml
 presentation bottle 240 ml

Formulation product item:

Option I Nevirapine - 50 mg / 5 ml - osu - bottle 240 ml
 Option II Nevirapine - osu - 50 mg / 5 ml - bottle 240 ml
 Option III Nevirapine - 50 mg / 5 ml - bottle 240 ml

A product item could constitute one or more order pack sizes.

An order pack size is defined as:

$$order\ pack\ size = presentation + \#\ units + form \tag{2}$$

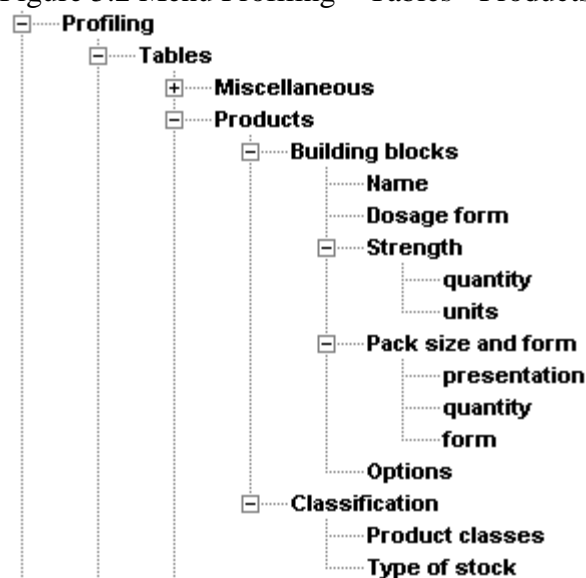
e.g.	presentation:	<u>Example I</u>	<u>Example II</u>
	# units/presentation unit:	bottle of	pack of
	form:	60	24
		tabs	bottles

The full descriptions of these examples are:

Product item	Order pack size
abacavir (ABC) – tab - 300 mg (as sulphate)	Bottle of 60 tabs
nevirapine – osu – 50 mg / 5ml – bottle 240 ml	Pack of 24 bottles

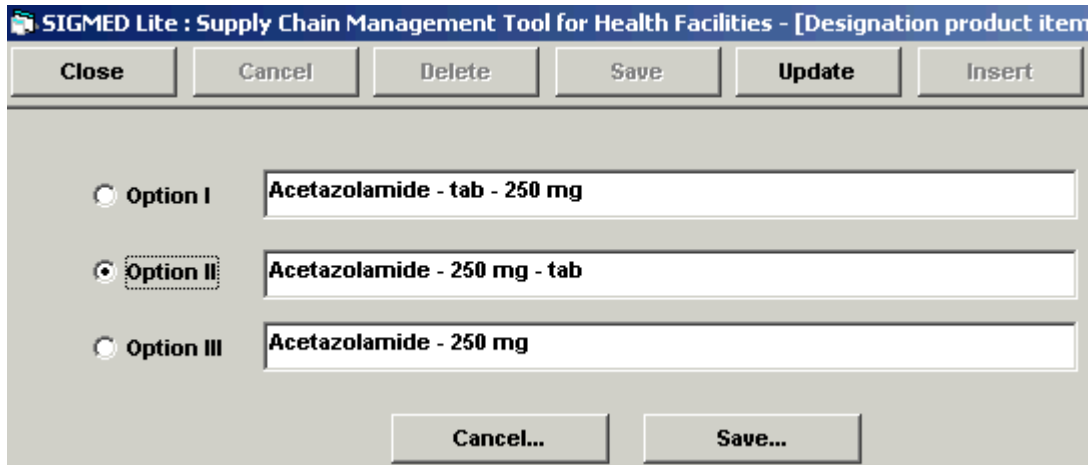
All these building blocks for the commodity and order pack size description are stored in base tables. The Menu Option <Profiling– Tables – Products – Building blocks> provides access to these tables (Fig. 5.2).

Figure 5.2 Menu Profiling – Tables - Products



The product items are created through the menu option <Commodities> (see Chapter 10.2).

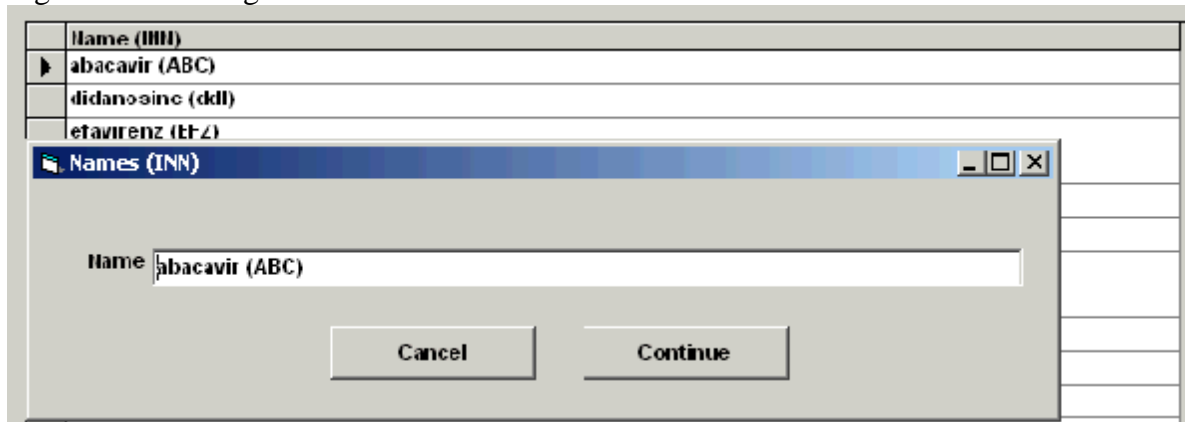
The formulation is defined through the menu option <Profiling – Tables – Products – Designation – Options>:



Creating new entries, updating and deleting is similar to the way as described in the previous chapter.

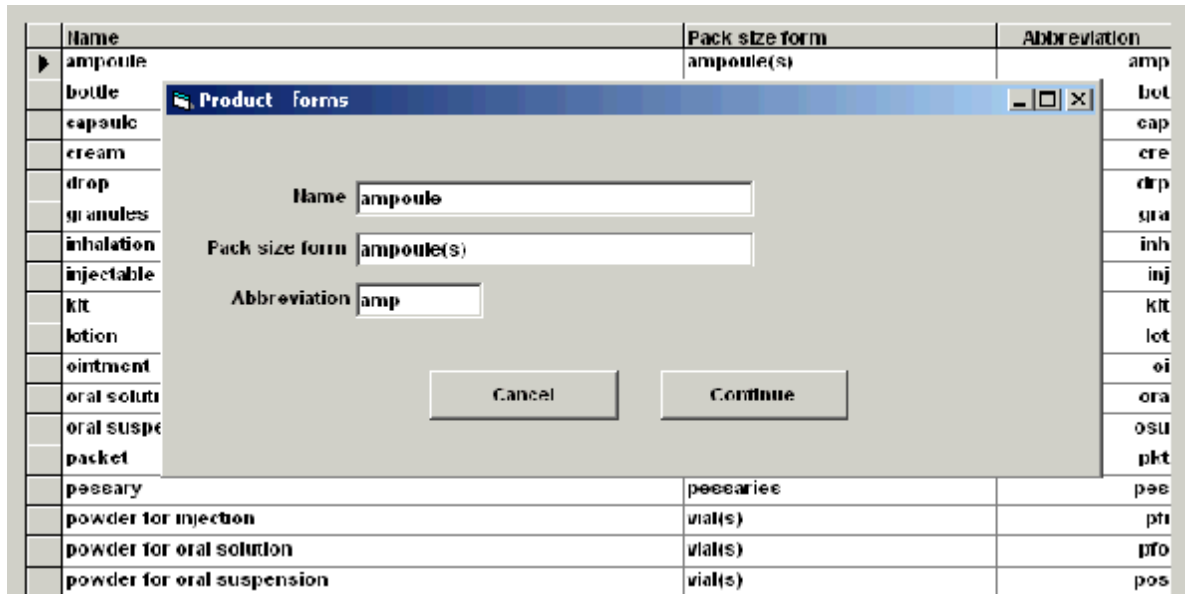
Examples are shown by the next figures.

Figure 5.3 Building block: Product names



In case of generic medicines it is preferred to enter the International Non-proprietary Name (INN).

Figure 5.4 Building block: Dosage form



Note that the “Dosage Form” data screen requires 3 fields: Name, Pack size form and Abbreviation. The latter refers to the name and must be unique.

Figure 5.5 Building block: Strength - Quantity

Quantity
▶ 0.1
0.25
0.3
0.5
0.9
1
10
10/0
100
1000
100000
114
12

Figure 5.6 Building block: Strength - Units

Unit
▶ %
% (hydrochloride)
% (sulphate)
% for dilution
g
IU
L
mcg
mcg (dipropionate)
mg
mg (anhydrous)
mg (as benzoate)
mg (as mesilate)
mg (as sodium salt)
mg (as sulfate)
mg (base)

Figure 5.7 Building block: Pack size and Form: form - Presentation

Form
▶ ampoule
bottle
box of
pack of
sachet
tin
tube
vial

Figure 5.8 Building block: Pack size and Form: Form

Unit
▶ amp
caps
doses
g
kg
kits
L
m
mg
ml
MU
tabs

Note that the code must be unique.

SIGMED Lite classifies stock into types:

- Catalogue items (normal stock items)
- Global Fund (ARV)
- Vertical Program (e.g. TB, STI)
- Donations

Within each type so-called product item classes can be defined. In the example of Fig 5.9 the classes Tablets and Capsules, Injectables and Vaccines belong to the stock type “Catalogue items”.

Table 5.9 Product item classes

Product Class	Type of stock
	VP (Y/N)
▶ A. Tablets and Capsules	Catalogue items
B. Injectables	Catalogue items
C. Vaccines	Catalogue items

Base Table: Product Class

Product Class:

Type of stock: ...

You can create stock types and product item classes via the menu option <Profiling – Tables – Products – Classification>.

5.1.3 Default values

The menu option <Default Values> comprises important settings, especially for the reports.

The heading and signatures sections of the following reports are stored in this table:

- Receipt voucher report
- Receipt discrepancy report
- Receipt – quality control
- Inventory control report
- Boarding off report
- Sales – invoice
- Sales – credit invoice
- Sales – non availability report
- Picking list

Example <Table Default values>:

Receipt Voucher: signature I	Pharmacist in Charge
Receipt Voucher: signature II	Stores Officer
Receipt Voucher: signature III	Clearing Officer

The heading section of the report constitutes: name, address line1 and address line 2.

Through this menu option the default value for some variables is also set like is shown by Table 5.10

Table 5.10 Default values

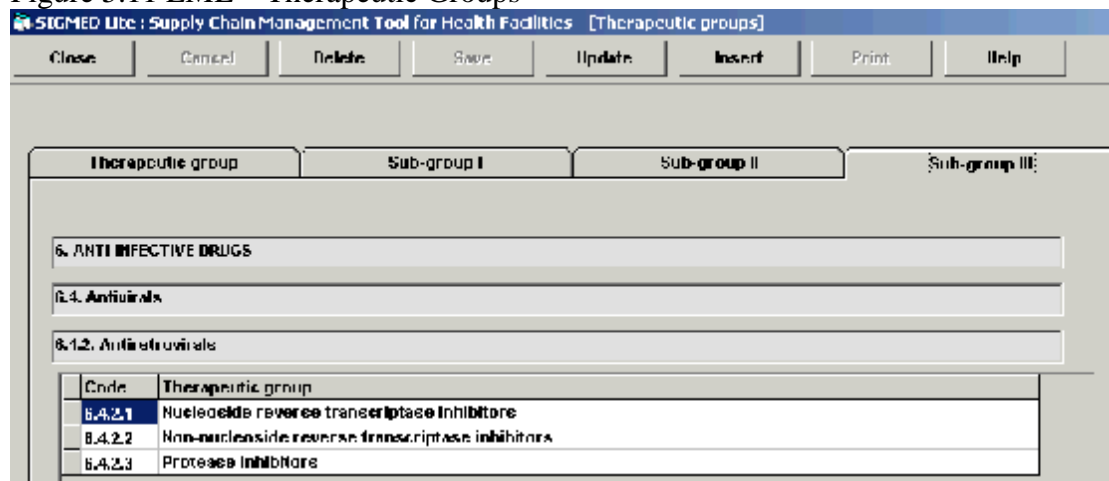
Description	value
Lead Time (months)	7
Stock order level (months)	12
Estimated Cost %	10
Minimum shelf life (months)	6
Financial Year - start month	7
Handling fee (%)	10
Surtax (%)	2.2

In the example of Table 5.1 the default value for the starting month of the financial year is set at 7 (July).

5.1.4 Pharmaceutical classification EML

SIGMED Lite follows the therapeutic Chapter classification of WHO’s Model List of Essential Medicines (<http://mednet3.who.int/eml>). Figure 5.11 displays the data screen.

Figure 5.11 EML – Therapeutic Groups



How to create a new Therapeutic Group?

1. Select the tab <Therapeutic Group> and click on the **Insert** button of the top menu button bar to open the data input screen.

2. Enter the Code and the name of the Therapeutic Group. Note that the code must be unique.
3. Click **Continue** to save the entries in the database or click **Cancel** to undo the transaction. The input screen is closed and the result is visible in the data screen.

Code	Therapeutic Group
7	New Therapeutic Group
7	New Therapeutic Group

4.

How to create a new therapeutic sub-group?

5. Select the tab <Therapeutic group> and select the record in the data table, click on the 2nd tab (Sub-group I) and click on the **Insert** button of the top menu button bar to open the data input screen.

6. Enter the Code and the name of the Therapeutic Sub-group. Note that the code must be unique within the Therapeutic Group.
7. Click **Continue** to save the entries in the database or click **Cancel** to undo the transaction. The input screen is closed and the result is visible in the data screen.

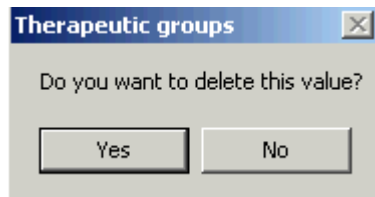
Code	Therapeutic Group
7. New Therapeutic Group	
7.1	New Therapeutic Sub-group

- Repeat steps 4 – 6 for creation of other sub-groups. Note that sub-group II is an underlying Chapter of sub-group II.

How to update or delete a Therapeutic (sub-)group?

- Select the tab <Therapeutic group> and select the record in the data table, click on the 2nd tab (Sub-group I) and click on the **Update** or **Delete** button of the top menu button bar.
- For updates: repeat step 5 – 6.

If you want to delete the (sub-)group the following message is shown:



- Click **Yes** to delete the value or **No** to cancel.

5.1.5 Currencies

Currencies are created through the menu option **Profiling– Tables – Currencies**.

A distinction is being made between a base currency and a local currency as is shown by Figure 5.12. In most cases there will be no difference between those two.

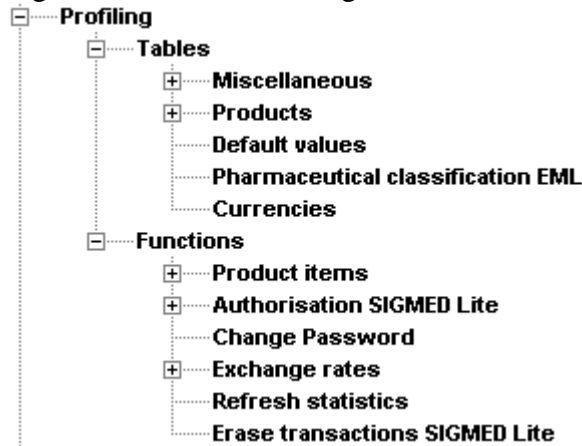
Figure 5.12 Currencies

	Currency	Base currency	Local currency
▶	BP	N	N
	Euro €	N	N
	MK	N	Y
	SAR	N	N
	USD	Y	N

5.2 Functions

SIGMED Lite disposes some (maintenance) functions which are located under the menu option <Profiling– Functions> (Fig 5.13)

Figure 5.13 Menu Profiling – Functions



5.2.1 Product items

Description

Normally, you are not allowed to make any changes when the transaction (e.g. receipt) has been consolidated. Exceptions are made for batch number, expiry date and the pricing mechanism of a batch.

Changing a batch number or expiry date is simple: select the batch and fill in the new value:

Stock code	Product Item	Batch number	Expiry month
1 - 1 - 1	Acetazolamide tab 250 mg	LK232	10/2008
1 - 2 - 1	Chloramphenicol 250 mg - 1tab	98-3-L1	12/2008
1 - 2 - 2	Chloramphenicol 250 mg - 1tab	KL12-3	09/2007
1 - 3 - 1	Chloroform - bottle 500 ml	KL54-1	05/2007
1 - 4 - 1	Change batch number / expiry date		01/10

1 - 1 - 1 Acetazolamide - 1tab - 250 mg

Old batch number

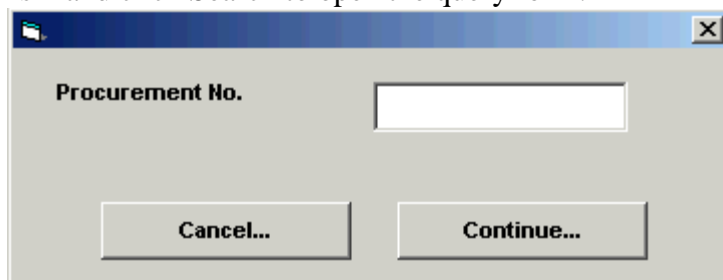
New batch number

During the product item receipt data entry the sales price mechanism of the received batch is registered (chapter 7.2).

The menu option <Profiling → Functions → Product items> allows you to change the price mechanism after the receipt has been consolidated.

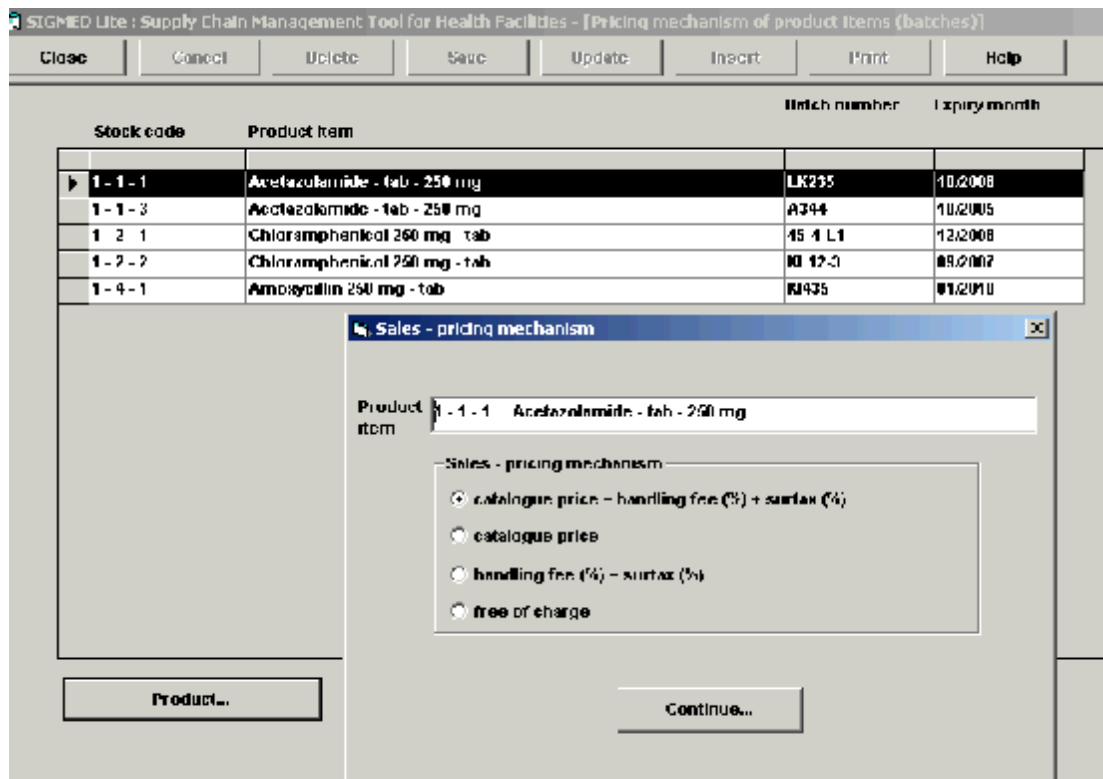
How to change the sales price mechanism of a product item (after consolidation of the receipt)?

12. Choose Menu option <Profiling → Functions → product items → Sales price mechanism and click Search to open the query form:



Note that the Procurement No corresponds with the first part of the stock code.

13. Enter the field <Procurement No> and click **Continue...** to open the form with the product items and click **Product...** to option the Options form:



14. Select the sales price mechanism option and click **Continue...**

5.2.2 Authorization SIGMED Lite

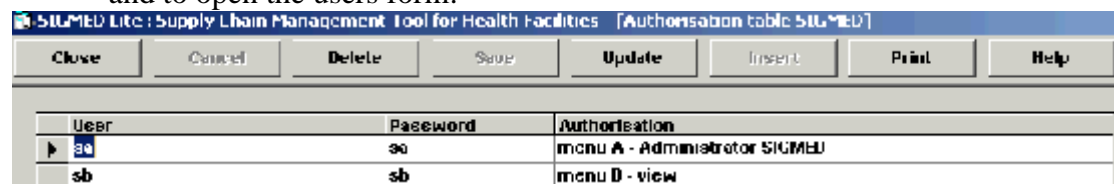
Description

SIGMED Lite has two standard menus (A and B). Users with menu A are allowed to conduct “create”, “update” and “delete” transactions; this menu gives full access to all functions of SIGMED Lite. Users with Menu B only have “view” grants; they are not allowed to create, modify, change data or to consolidate transactions.

Users with Menu A are authorised to create new users.

How to create a new user?

15. Choose Menu option <Profiling → Function → Authorization SIGMED Lite and to open the users form:



User	Password	Authorisation
sa	sa	menu A - Administrator SIGMED
sb	sb	menu B - view

Two users are displayed with different grants: Menu A (Administration) and Menu B (View).

16. Click **Insert...** to open the user data entry form, fill in the details and click **Close...**



Authorisation SIGMED Lite

User:

Full Name:

Password:

Authorisation: ...

5.2.3 Change password

Each user is able to change his password. Figure 5.14 shows the form.

Figure 5.14. User password form



New password:

Conform new password:

Cancel Continue

5.2.4 Exchange rates

Description

Exchange rates are updated through the menu option **Profiling – Functions – exchange rates**

Figures 5.15 and 5.16 show the SIGMED Lite exchange rate forms.

Figure 5.15 Exchange rates data entry form

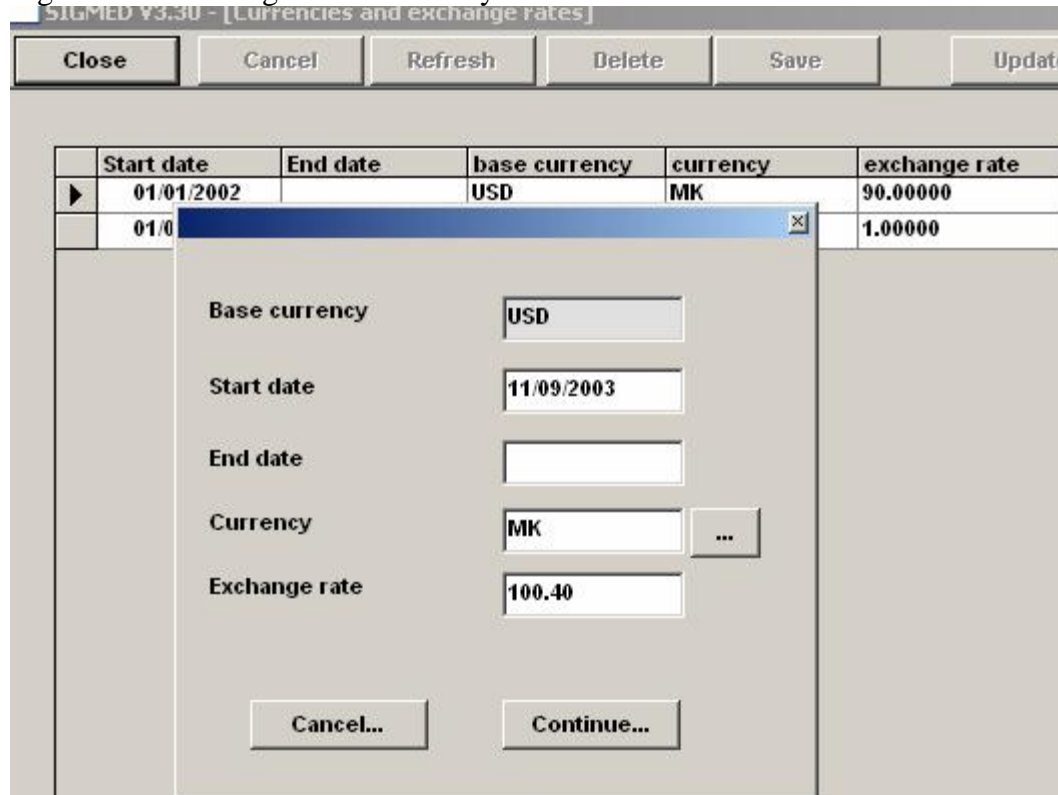
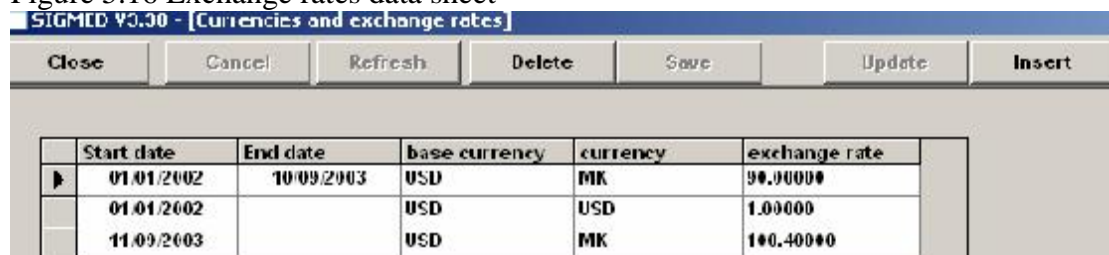


Figure 5.16 Exchange rates data sheet



How to change an exchange rate?

1. Choose <Profiling> → <Functions> → exchange rates → modify.
2. Click in <Insert> to open the pop-up form (Fig. 5.15).
3. Select the currency and fill in the exchange rate and click <Continue...>.

By default, SIGMED Lite takes the present date as start date. It is advisable not to take an earlier date.

The end date should be left blank. SIGMED Lite automatically assigns the end date of the previous exchange rate (if present). In the example of Fig. 5.16 the end date is set at “10/09/2003”.

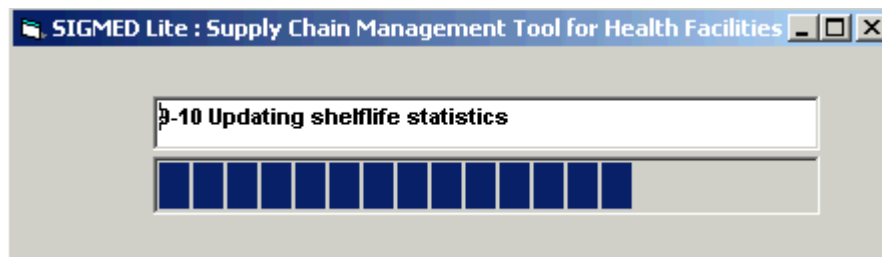
If mistakes are made, select the just entered exchange rate, click the <delete> button of the top menu bar and go to step 2.

How to delete an exchange rate?

4. <Profiling> → <Functions> → exchange rates → modify.
5. Select the exchange rate and click the <Delete> button of the top menu bar (Fig 5.16). Deletion is only possible when the exchange rate has not been used yet.

5.2.5 Refresh statistics

Each day the statistics used in the management information module are automatically refreshed by the first user who logs on to SIGMED LITE. The following form is shown:



After consolidation of transactions (e.g. receipts, sales) there might be a need to have the management information already updated and not to wait for the next day. The menu <Profiling → Functions → refresh statistics> allows the user to update the statistics manually.

5.2.6 Erase transactions (purchase orders)

It is possible to erase purchase orders and all logistic transactions (receipt, sales, warehouse management) from the database. It is strongly advised to make a backup of the existing database first. It should be noted that an erased purchase order cannot be restored. In this case you should use the restore function of the Maintenance module.

Two options are available:

Option 1: deletion of all data of the purchase order;

Option 2: deletion of all (consolidated) receipt, sales, warehouse management data.

The second option leaves the List of Requirements intact.

How to erase a transaction (purchase order)?

- 1) Make a backup of the database (see Chapter 4).
- 2) Choose <Profiling --> Functions --> Erase transactions> to open the Erase options form:

No.	Purchase Order
1	Test No. 1
2	dsdsd

Purchase Order+ all transactions (receipts, sales, warehouse management)

Receipt, sales, warehouse management transactions

Close... Continue...

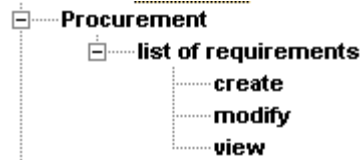
All purchase orders are listed.

- 3) Select an erase option and click continue... and confirm your choice.

6 Procurement

Procurement of commodities in SIGMED Lite is based on direct ordering.

Figure 6.1 Menu Procurement



The procurement process involves the creation of a List of Requirements (= list of items to be procured). SIGMED Lite can play a supporting role in the process of selection and quantification by providing information about consumption (see chapter 12.1).

This chapter describes the process of procurement which constitutes two parts:

- Creation of purchase order (chapter 6.1)
- Selection of product items (chapter 6.2)

6.1 Purchase Order details

Figure 6.2 shows the form of a purchase order, which contains basic information. SIGMED Lite automatically generates a unique Purchase Order ID (PO ID), which will be the first element of the stock code (see 7.2.1 - Receipts).

Figure 6.2 List of Requirements: detailed information of the purchase order

Lead time is the amount of time from the point at which you determine the need to order to the point at which the inventory is on hand and available for use. It should include supplier or manufacturing lead time, time to initiate the purchase order or work order including approval steps, time to notify the supplier, and the time to process through receiving and any inspection operations. In SIGMED Lite it comprises the period: start date lead time – date consolidation receipt.

6.2 List of requirements: order item list

Creating a List of requirements is done in **two** ways. The **first** way is to select a product item, its order pack size and enter the quantity and estimated purchase price (Fig. 6.3). The number of pack should be a multiple of the order pack size. If this is not the case a message is displayed.

By default the order pack purchase price of the latest purchase order of the selected product item is filled in. The user is able to modify this field. Purchase prices are expressed in the base currency. Information about purchase prices of the last 24 months is available as well (button <Supplier Prices>)

Figure 6.3 List of Requirements: products items and quantity to order

SIGMED Lite: Supply Chain Management Tool for Health Facilities - [List of Requirements - Central Medical Stores]

Close Cancel Delete Save Update Insert Print Help

PO ID and description: 1 - Test No. 1 Purchase Order No.: PO 1122

Product item: Acetazolamide 250 mg - tab

Order pack size: tin 100 tabs + No. of items: 5

No. of units: 2000 # of packs to order: 20

Purchase price/Order pack (USD): 3.1500 Total (USD): 63.00

no.	item code	product item	units	pp (USD)
▶ 1	A0004	Acetazolamide 250 mg - tab	2,000	0.0315
5	A0008	Diclofenac sodium 25 mg - tab	1,000	0.0071
4	A0039	Amoxicillin 250 mg - tab	10,000	0.0025
2	A0102	Chloramphenicol 250 mg - tab	10,000	0.4300
3	D0124	Chloroform 125 mg/ml - bottle 500 ml - tab	5	20.0000

Product info... Products: stock... Summary... Order levels... Supplier prices... Re-ordering... Search...

In the List of Requirements form (Fig. 6.3) information about the selected product item and its stock position is provided by the buttons <Product Info...> and <Products: stock...> respectively.

The button <Order levels...> displays information about the Average Monthly Consumption and the theoretical quantity to procure (Figure 6.4). See chapter 12.1 for a detailed explanation of this form.

Figure 6.4 Average monthly consumption and re-order levels

The screenshot shows the 'Average Monthly Consumption (AMC), Stock Levels (SL) and Re-Order Levels (ROL)' form. At the top, there are buttons for Close, Cancel, Delete, Save, Update, Insert, Print, and Help. The form displays the item name 'Acetazolamide 250 mg - tab' and its lead time (1 month) and stock order level (5 months). Below this is a table for Stock Level Receipt Data and Time-related Re-Order Level. A 'Distribution' table shows monthly sales and stock out (0) from 2004 to 2005. A 'Shelf life (months)' table shows expiry dates and stock quantities for various batches.

consumption	due-in	stock	AMC - 3	AMC - 6	AMC - 12	SL - 3	SL - 6	SL - 12	OL - 3	OL - 6	OL - 12
Sales	1,995	10,500	1,000	200	625	600	>100	>100	0	0	0

month	sales	stock out (0)
1 - 2005	0	0
2 - 2005	4,050	0
3 - 2005	32	0
4 - 2005	0	0
5 - 2005	40	0
6 - 2005	80	0
7 - 2005	40	0
8 - 2005	80	0
9 - 2005	0	0
10 - 2004	0	0
11 - 2004	0	0
12 - 2004	0	0
1 - 2004	0	0
2 - 2004	0	0
3 - 2004	0	0
4 - 2004	0	0
5 - 2004	0	0
6 - 2004	0	0
7 - 2004	0	0

batch No	expiry date	shelf life	stock
A011	12/2005	42	9,900
S8333	10/2005	40	88,643

Clicking the button <Summary...> of Figure 6.3 opens a new form (Fig. 6.5), that summarizes the List of Requirements; it shows also the total estimated value of purchase order (expressed in base currency).

Figure 6.5 List of Requirements: summary

The screenshot shows the 'List of Requirements - Central Medical Stores' form. It displays the PO ID and description '1 - Test No. 1', the supplier 'Central Medical Stores', and the PO No. 'PO 1122'. The form contains a table with columns for item code, description, no. of units, pp / unit, and value. The total estimated value is shown as 4,405.10.

no.	item code	no. of units	pp / unit	value
1	A0001	2,000	0.0315	63.00
4	A0009	10,000	0.0025	25.00
2	A0102	10,000	0.1300	1,300.00
3	D0124	5	20.0000	100.00
5	A0008	1,000	0.0071	7.10

Total (1151) 4,405.10

The **second** way to add items to the list of requirements is to make use of the re-ordering module (See Chapter 12.1). The button <re-ordering...> (Fig. 6.3) displays information about the product items to re-order. An example is shown by Figure 6.6

Figure 6.6 Re-order levels (Units)

SIGMED Lite : Supply Chain Management Tool for Health Facilities [Average Monthly Consumption (AMC), Stock Levels (SL) and Re-Order

Clear Cancel Delete Save Update Insert Print Help

item code	product item	ROL (Units)
A0039	Amoxicillin 250 mg - tab	20,000
A0102	Chloramphenicol 250 mg - tab	5,000

Load Time (months)

Stock Order Level (months)

List of Requirements...

Search...

			Stock Level Receipt Date			Theoretical Re-Order Level					
consumption	due-in	stock	AMC - 3	AMC - 6	AMC - 12	SL - 3	SL - 6	SL - 12	OL - 3	OL - 6	OL - 12
Sales	0	1,799	6,400	3,120	2,800	0.0	0.0	0.0	43.001	20,044	17,804

Shelf life (months)

batch no.	expiry date	shelf life	stock
K0435	01/2010	55	1,799

All relevant quantification information of the selected product item is available like stock on hand, stock on order, average monthly consumption based in the last 3, 6 and 12 months consumption, stock level at the moment of expected receipt, which depends on the lead time and the theoretical re-order levels, procurement status and shelf life of stock on hand.

In the example of Figure 6.6 the re-order level of “Amoxicillin – 250 mg - tab” has been defined at 20000 Units. Changes in re-order level can be made via the sub-menu “Management Information → Procurement → Quantification → Average Monthly Consumption and Order Levels”.

By clicking the <List of Requirement...> button the product item is automatically added to the List of Requirements provided the order pack size exists.

How to create a List of Requirements?

1. Choose Menu option <Procurement → List of Requirements → create> to open the detailed purchase order form (Fig 6.2)
2. Enter the *purchase order details*:
 - 2.1 Description of the procurement and purchase order (name and number)
 - 2.2 General data: start date Lead Time, observations

Click the button next to the field <Suppliers...>, select the supplier from the list.

If a supplier is not in the list contact the system administrator.

3. Press the <save> button.

SIGMED Lite automatically generates a purchase order ID (PO ID). This number is a sequence number and it is used by SIGMED Lite to identify purchase order; it constitutes the first element of the stock code (see chapter 7.2.1).

After mouse clicking the “Save” button of the top button bar, the button “List of Requirement...” becomes enabled and the user can continue with the creation the product item list.

4. Press the <List of Requirements...> button to create to order item list (Fig. 6.3).

There are **two** options to add product items to the list.

5. *Option I.* Choose a product item from the data table. If a product item is not in the data table create the item first (see chapter 10.2).

The order pack size and order pack purchase price of the latest purchase order are displayed. If required the purchase price can be modified.

To change the order pack size: click the button next to the field <Order pack size> to open the available order pack size for the selected product item and supplier.

Supplier	Pack size	Order pack size	Pack price
Central Medical Stores	100 table	100 tablet(s)	USD 3.1600

The field <Order pack size> is mandatory. One should define the order pack(s) before creating a purchase order (see chapter 10.5).

6. Select the order pack size from the data table and click <Continue...> to close the form. Change the estimated order pack purchase price if necessary
7. Fill in the field <No. of Units>. Note that the number of packs to order is automatically calculated. The number of pack should be a multiple of the order pack size. If this is not the case a message is displayed.
8. Press the <Save> button.
9. Click the <Update> button to modify the quantity to order or the purchase price.
10. Press the <Insert> button to add another product item to the List of Requirements (and go to step 5).
11. Additional information about the selected product item is available:
 - 11.1 Choose <Product Info...> to open the product data sheet.

- 11.2 Choose <Products: stock...> to display to actual stock position.
- 11.3 Choose <Order levels...> to display the Average Monthly Consumption and Order levels (Fig. 6.4)
12. Press <Summary...> to open the summary form: (total) estimated value of the purchase order (Fig. 6.5)
13. Press <Print> ... to print the List of Requirements
14. *Option II.* Click <Re-ordering...> to open the re-order form (Fig. 6.6). The product items and their defined re-order level, expressed in Units, are shown in the upper table. Select the product item and click <List of Requirements...>. Note that the re-order level cannot be changed in this form. Changes can only be made via the sub-menu “Management Information → Procurement → Quantification → Average Monthly Consumption and Order Levels”.

How to modify a List of Requirements?

15. Choose Menu option **Procurement → List of Requirements → modify**, select the procurement number and click <Details...> for the procurement details (Fig. 6.2) or <List of Requirements...> for the product items order list (Fig. 6.3).
16. Click the <Update> button. Enter the new value and press the <Save> button.

How to add a product item to an existing List of Requirements?

17. Choose Menu Option **Procurement → List of Requirements → modify**, select the procurement number and click <List of Requirements...> for the product items order list.
18. See step 10

How to delete a List of Requirements?

19. Procurement (details):

Choose Menu Option **Procurement → List of Requirements → modify**, select the procurement number and click the <Details...> button.
Press the <delete> button to delete the procurement (details + product items order list). Note that, if an order list already exists, SIGMED Lite asks the user to confirm the deletion.

20. Product items order list:

20.1 Choose Menu Option **Procurement** → **List of Requirements** → **modify**, select the procurement number and click the <List of Requirements...> button.

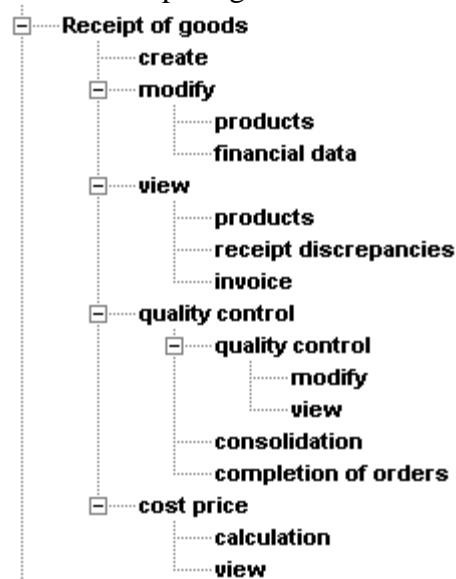
20.2 Select the product item and click the < delete> button.

7 Receipt of goods

This chapter discusses the “Receipt of Goods” module (Fig. 7.1). Information, captured during the receipt, is very important in the process of managing drug supplies. The receiving process involves checking the goods for quality and quantity against the purchase order.

The submenu’s <create> and <modify> enable the user to register receipt information, which constitutes financial data (supplier’s invoice) and product data.

Figure 7.1 Receipt of goods menu



SIGMED Lite automatically generates a unique stock code, which comprises essential product information, like batch number and expiry date.

Quality control is followed by consolidation of the receipt. After consolidation the received products belong to the inventory of the warehouse and can be issued.

SIGMED Lite values the stock on the basis of cost price. The cost price of a product item constitutes the purchase price and (part of) the additional cost of the receipt. The cost price of each product item is calculated by SIGMED Lite. The calculation is based on the estimated additional costs and not on real costs.

7.1 Arrival of shipments

7.1.1 Supplier's Invoice

The supplier’s invoice is registered first before product data can be entered. A unique receipt number identifies each receipt.

In the form shown by Figure 7.2 the general supplier’s invoice data and additional costs of the receipt are registered.

Figure 7.2 Receipt: Invoice data form

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Supplier's Invoice]

Close Cancel Delete Save Update Insert Print

PO ID and description: 1 - Test No. 1

Purchase Order: PO 1122 Receipt No.: R04-05/3

Supplier: Central Medical Stores

Date of receipt: 23/03/2005

Delivery Note No.: No 2005-11

Supplier's invoice

Commercial invoice No.	HA1234
Date	23/03/2005
Payment date	23/04/2005
Currency	MK
Amount (MK)	347.92
Discount (%)	
Total to pay (MK)	347.92
Exchange rate	110.45
Total (HSN)	3.15

Additional costs

Clearance (MK)	40.00
Procurement (MK)	10.00
Transport (local) (MK)	0.00
Total (MK)	50.00
Total (USD)	0.46
Estimated Costs (in %)	10
Real Costs (in %)	14.3

The receipt number is generated automatically by SIGMED Lite. It comprises:

R/ financial year / sequence number

In this example the company's financial year starts at July (see Chapter 5.1.3 – *Default values*)

By default, some fields are already filled in by SIGMED Lite like “Currency” and “Amount”. The amount of the invoice is expressed in the base currency.

The fields “Clearance”, “Procurement” and “Transport (local)” are related to the additional costs. These are expressed in local currency.

The field “Real Costs (in %)” indicates the total additional costs as percentage of the supplier's invoice amount. In the example of Figure 7.2 the estimated costs are 14.3 % of supplier's invoice.

In reality, most of the additional costs will not be known at the moment of consolidation of the receipt. Invoices may be sent to you some weeks later. For this reason SIGMED Lite uses an estimate for the calculation of the cost price. This estimate must be entered in the field “Estimated Cost (in %)” (Fig 7.2). The default value for the estimated costs is set at 10 % (see Chapter 5.1.3 – *Default values*).

7.1.2 Receipt of goods

Offloaded goods must be classified according batch number, expiry date and packaging size before they are stored. They have the status “on-hold”.

The data form shown by Fig. 7.4 contains specific information of the received product item like manufacturer, country of origin, batch number and expiry date. The **stock code** is automatically generated by SIGMED Lite. It constitutes three parts: 1) the Purchase Order ID (PO ID), 2) the item order number of the List of Requirements and 3) a sequence number.

In the example the stock code of the batch L12231 (Azetazolamide - tab - 250 mg) is 1-1-2.

In this form the supplier’s stock code (or supplier’s product item code) can also be entered; this will facilitate tracking and tracing the commodities.

Figure 7.4 Receipt product data form

The screenshot shows the 'Receipt product data form' in the SIGMED Lite application. The form is titled 'SIGMED Lite : Supply Chain Management Tool for Health Facilities'. It features a menu bar with 'Close', 'Cancel', 'Delete', 'Save', 'Update', 'Insert', 'Print', and 'Help'. The main form area is divided into several sections:

- Product item:** Acetazolamide - tab - 250 mg
- Supplier:** Central Medical Stores
- Manufacturer:** PARACETANOL INC. RSA
- Country of origin:** RSA
- Manufacturing date:** 17/12/2004
- Batch number:** L12231
- Expiry date (mm/yyyy):** 03/2007
- Shelflife (m):** 29
- Supplier's stock code:** 123-11-4
- Order pack size:** 1m 100 tabs
- Stock code:** 1-1-2
- Ho. of Units procured:** 6000
- Purchase order: No. of Units delivered:** 100
- Quality Control:** 0
- Balance PO:** 4001
- No. of Units rejected:** 0
- Sales - pricing mechanism:**
 - catalogue price - handling fee (%) + surtax (%)
 - catalogue price
 - handling fee (%) + surtax (%)
 - free of charge
- Receipt:**
 - Arrived:** 100
 - On hold:** 99
- Purchase price/unit (USD):** 0.0316

At the bottom of the form, there are two buttons: 'Receipt discrepancy...' and 'Modify quantity...'.

For each batch the sales pricing mechanism should be defined. SIGMED Lite distinguishes four options (see also Chapter 8 - Sales):

1. catalogue price + handling fee + surtax(%)
2. catalogue price only
3. handling fee + surtax only
4. free of charge

The number of units (all with the same batch number and expiry date) should be entered in the field “No. of Units – arrived”.

By default, the field “No. of Units – on hold“ equals the field “No. of Units - arrived”. This “on-hold” field can be modified by the user in case of quality control, broken / damaged, missing products.

The unit purchase price, expressed in the base currency, refers to the commercial invoice price. By default, SIGMED Lite fills in the estimated purchase price (see List of Requirements, Chapter 6.2).

The difference between the number of units “arrived” and “on hold” (receipt discrepancies) is registered in a separate form. The reason must be given (Fig. 7.5). It is possible to enter various reasons.

Figure 7.5 Receipt: registration of receipt discrepancies

In the example of Figure 7.5 one unit is taken for Quality Control (sample laboratory).

The described process is repeated for each product item.

7.1.3 Receipt of goods –submenu View

Several forms provide procurement and receipt information.

Figure 7.6 Status procurement form

Item code	product item	ordered	arrived	QC	MD	on hold	balance
A0001	Acetazolamide 250 mg - tab	2,000	5	0	0	6	1,995
A0030	Amoxicillin 250 mg - tab	10,000	10,000	0	0	10,000	0
A0102	Chloramphenicol 250 mg - tab	10,000	10,000	0	0	10,000	0
D0124	Chloroform 125 mg/ml bottle 500 ml - tab	5	5	0	0	6	0
A0008	Diclofenac sodium 25 mg - tab	1,000	1,000	0	0	1,000	0

Figure 7.6 displays detailed procurement status information:

1. Quantity ordered
2. Quantity arrived
3. Quantity taken for Quality Control (QC)
4. Quantity Missing/Damaged products (M/D)
5. Quantity on hold
6. Balance

The *Balance* is calculated as:

$$Qty\ ordered - (Qty\ on\ hold + Qty\ for\ Quality\ Control)$$

The button <Details> opens a new form with detailed information at stock code level. From this form two (fixed) reports of the receipt can be generated:

- a. Receipt voucher report
- b. Discrepancies receipt report

Figure 7.7 Overview receipt

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Received product items]

Close Cancel Delete Save Update Insert Print Help

PO ID and description: ? - total Receipt No.: R001 06/17

Purchase Order: A122 Delivery Note: DS-11

Supplier: MissionPharma International

Quantity on hold

Stock code	Product item	Qty of units
2 - 1 - 2	Acetazolamide 250 mg - tab	90,050
2 - 2 - 1	Amitriptyline 25 mg - tab	4,000
2 - 2 - 2	Amitriptyline 25 mg - tab	1,000

Units... Summary...

The function of the buttons is:

- Button ‘Units...’ displays the product data sheet (Fig. 7.4)

- Button ‘Summary’ displays Receipt summary information about the purchase (Fig. 7.8).

Figure 7.8 Summary information purchase

Item code	product item	ordered	arrived	QC	M/D	on hold	balance
A0001	Acetazolamide 250 mg - tab	2,000	5	0	0	6	1,995
A0030	Amoxicillin 250 mg - tab	10,000	10,000	0	0	10,000	0
A0102	Chloramphenicol 250 mg - tab	10,000	10,000	0	10	10,000	0
D0124	Chloroform 125 mg/ml bottle 600 ml tab	5	5	0	0	6	0
A0008	Diclofenac sodium 25 mg - tab	1,000	1,000	0	0	1,000	0

How to register a supplier’s invoice?

1. Choose Menu option <Receipt of goods → create>.
2. Select the Purchase Order ID and click <Receipt...>.

PO ID	description	date	PO No.	supplier
2	Test No. 2	10/05/2005	A122	Mission Pharma International
1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

Note that only the procurement no’s with status “Completed=No” are listed

3. Select the tender (= Supplier + Receipt Site + PO number + Shipment number) and click <Receipt...> to open the Invoice data sheet (Fig. 7.2).

Note that SIGMED Lite has generated a Receipt Number. This number cannot be changed.

Receipt No.	R/04-05/3
-------------	-----------

4. Enter or modify the following fields:
 - Date of receipt
 - Delivery Note No.
 - Commercial Invoice No.
 - Invoice Date of issue
 - Invoice Payment date
 - Currency
 - Amount
 - Discount (%)
 - Estimated Costs (in %)
 - Additional Costs: Clearance, Procurement, Transport

The form constitutes two fields “Total to Pay”. The first is expressed in the currency of the invoice. The second is always expressed in the base currency. In the example of Figure 7.2 the supplier’s invoice is expressed in MK.

The field “Estimated costs (in %)” is not mandatory. It can also be entered under the menu option <Receipt of goods → Cost price>.

5. Click save and the button <Products to receive...> appears.

SIGMED Lite assumes that after entering the invoice data the user continues with registering the data of the received product(s) (see Chapter 7.1.2). If this is not the case, SIGMED Lite alerts the user of this situation and asks if the invoice data should be deleted. Choose <No> if the invoice data should be kept and follow the steps described in Chapter 7.1.2 for registering the product item receipt data.

How to register the receipt of a product item?

6. If the invoice data have not yet been registered: go to Step 1 else choose Menu Option <Receipt of goods → modify → products>.
7. Select the Purchase Order ID and click <Receipt...>

PO ID	Description	Supplier	PO No.	Date
2	Test No. 2	MissionPharma International	A122	10/06/2005
1	Test No. 1	Central Medical Stores	PO 1122	28/11/2004

8. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Receipt...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1		
Purchase Order	PO 1122		
Supplier	Central Medical Stores		
	Receipt No.	Receipt date	Delivery Note
	R/04-05/13	09/06/2005	D5567
			Invoice
			22

Note that the button <Status...> opens a new form with detailed product information about the selected invoice.

9. Click the button <Products to receive...> of the Invoice data form to open the Tender Status form:

item code	product item	ordered	arrived	QC	M/D	on hold	balance
A0001	Acebutamolide 250 mg - tab	2,000	5	0	0	6	1,395
A0030	Amoxicillin 250 mg - tab	10,000	10,000	0	0	10,000	0
A0102	Chloramphenicol 250 mg - tab	10,000	10,000	0	0	10,000	0
D0124	Chloroform 125 mg/ml bottle 500 ml - tab	5	5	0	0	6	0
A0008	Diclofenac sodium 25 mg - tab	1,000	1,000	0	0	1,000	0

10. Select the product item to be registered and click <Receipt...> to open the Receipt product data sheet (Fig. 7.4).

11. Enter the fields:
 - Manufacturer

- Country of origen
- Manufacturing date
- Batch number
- Expiry date (format: “mm/yyyy”)
- Number of Units: arrived
- Number of Units: on hold
- sales – pricing mechanism

If units are damaged/missing and/or a sample is taken for quality control (QC), update the field “Number of Units - On Hold”.

12. Click <Save>. If there’s a discrepancy between the No. of Units “arrived” and “on hold” the user is forced to register the details of this difference (go to step 13).

If there is no receipt discrepancy: go to step 16.

13. Click <Receipt Discrepancy> to open the Receipt Discrepancy form:

No.	Reason	No. of Units
1	sample laboratory	1

14. Click <Insert> , enter the field “Quantity”, select the “Reason” and click <Continue...> (see Fig 7.5)
15. Repeat step 14 until all units have been registered and click <Close> to re-enter the Receipt product data sheet (Fig. 7.4).
16. Repeat step 10 through 15 for all the other products of this receipt (or for the same product but with another batch number and/or expiry date and/or packaging size). Do not create a new receipt because this action will create a new Receipt Number.

How to modify the supplier’s invoice data?

17. Choose Menu Option <Receipt of goods → modify → products>.
18. Select the Purchase Order ID and click <Receipt...>

PO ID	Description	date	PO No.	supplier
2	lot No. 2	10/05/2005	A122	Mission/Pharma International
1	Test No. 1	20/11/2004	PO 1122	Central Medical Stores

19. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Invoice...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
▶	R/04-05/13	09/06/2005	D5567	22

Note that the button <Status...> opens a new form with detailed product information about the selected invoice.

20. Click <Update>, enter the new value(s) and press <Save>.

Pressing the button <Received products> displays information about the received product(s). It is not possible to make modifications in the subsequent forms.

21. Press <Close> to quit the form.

How to modify the product item receipt data?

22. Choose Menu Option <Receipt of goods → modify → products>.
23. Select the Purchase Order ID and click <Receipt...>

	PO ID	Description	date	PO No.	supplier
▶	2	Test No. 2	10/06/2005	A122	Mission/Pharma International
	1	Test No. 1	09/06/2005	PO 1122	Central Medical Stores

24. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Invoice...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
▶	R/04-05/13	09/06/2005	D5567	22

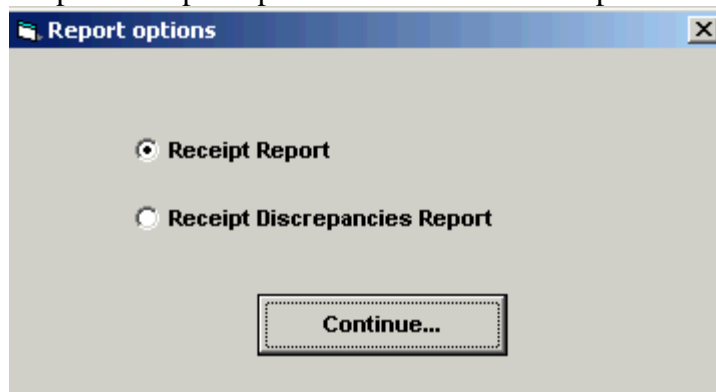
25. Click the button <Received Products ...> of the Invoice data form to open the Receipt Product Overview form (Fig 7.7)
26. In the Receipt Overview form 2 buttons are available:

- Press <Summary...> to display the tender status information:

PO ID and description	1 Test No. 1				
Purchase Order	PO 1122				
Supplier	Central Medical Stores				
Product item	ordered	arrived	balance	completed	
Acetazolamide 250 mg - tab	7,000	5	1,995	N	
Amoxicillin 250 mg - tab	10,000	10,000	0	Y	
Chloramphenicol 250 mg - tab	10,000	10,000	0	Y	
Chloroform 125 mg/ml - bottle 500 ml - tab	5	5	0	Y	
Diclofenac sodium 25 mg - tab	1,000	1,000	0	N	

- Select the product item and press <Units...> to open the Receipt product data sheet (Fig. 7.4) and go to step 11.

27. Press <Print> to open the report options form and select a report:



How to add a product item to an already registered receipt or supplier’s invoice?

- 28. Choose Menu Option <Receipt of goods → modify → products>.
- 29. Select the Purchase Order ID and click <Receipt...>

PO ID	description	date	PO No.	supplier
2	Test No. 2	10/05/2005	A122	Mission/Pharma International
1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

30. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Invoice...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
Receipt No.	Receipt date	Delivery Note	Invoice	
R/04-05/13	09/06/2005	D5567	22	

31. Click the button < Products to receive...> of the Invoice data form to open the Status procurement form (Fig 7.6). Go to step 10.

How to delete a supplier's invoice?

This action is not possible when product items have been registered. In this case the product item entries have to be deleted first (see 7.4.7).

32. Choose Menu Option **Receipt of goods** → **modify** → **financial data**.

33. Select the Purchase Order ID and click <Receipt...>

	PO ID	Description	date	PO No.	supplier
▶	2	Test No. 2	10/06/2005	A122	Mission/Pharma International
	1	Test No. 1	20/11/2004	PO 1122	Central Medical Stores

34. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Invoice...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
▶	R/04-05/13	09/06/2005	D5567	22

35. Click <Delete>. The user is asked for confirmation.

36. Press <Close> to quit the form.

How to delete a product item from a receipt?

37. Choose Menu Option <Receipt of goods → **modify** → **financial data**>.

38. Select the Purchase Order ID and click <Receipt...>

	PO ID	Description	date	PO No.	supplier
▶	2	Test No. 2	10/06/2005	A122	Mission/Pharma International
	1	Test No. 1	20/11/2004	PO 1122	Central Medical Stores

39. Select the invoice (= Supplier + PO number + Delivery Note + Receipt No. + Invoice No.) and click <Invoice...> to open the Invoice data sheet (Fig. 7.2).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
▶	R/04-05/13	09/06/2005	D5567	22

40. Click the button <Received Products ...> of the Invoice data form to open the Receipt Product Overview form (Fig 7.7)

41. Select the product item and press <Units...> to open the Receipt product data sheet (Fig. 7.4)

42. Click <Delete>. The user is asked for confirmation.

7.2 Receipts: Quality control

The menu <Quality Control> constitutes three sub menus: <Quality Control>, <Consolidation> and <Completion of orders> (Fig.7.1).

Received product items have the status “on hold”. Batches obtain the status “rejected” in SIGMED when e.g. quality analysis results are negative. An example is presented by Figure 7.9.

Figure 7.9 Quality control: rejection of product items

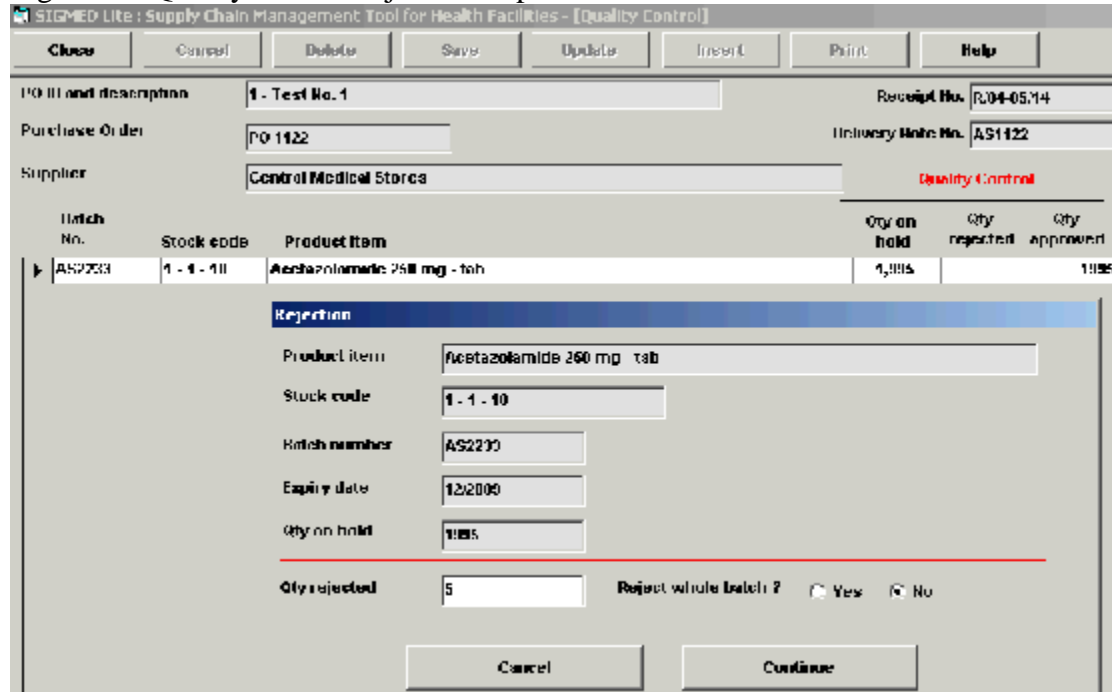


Figure 7.10. Quality control: rejection of product items - overview

Batch No.	Stock code	Product item	Qty on hold	Qty rejected	Qty approved
AS2230	1-1-10	Acetazolamide 250 mg - tab	1,995	5	1990

The last step of the receipt process is the consolidation of the received product items. It implies a status change from “on hold” to “accepted”. After consolidation the product items can be issued to customers/patients.

By default, consolidation of the receipt is done for each product item at stock code level. However, the whole batch (several stock codes with the same batch number) or even the whole receipt (all product items) can be consolidated at the same time as well (Fig. 7.11)

Figure 7.11. Consolidation of a receipt

PO ID and description Test No. 1 **Receipt No.** R04-06/14

Purchase Order PO 4122 **Delivery Note No.** AS1122

Supplier Central Medical Stores **Quality Control**

Batch No.	Stock code	Product Item	Qty on hold	Qty rejected	Qty approved
AS2233	1 1 10	Abezazolamide 250 mg tab	1,985	6	199

Consolidation

Supplier Central Medical Stores

Receipt No. R04-06/14

Receipt date 10/08/2005

Batch number AS2233

Expiry date 12/2008

Consolidate whole batch ? Yes No

Consolidate this receipt ? Yes No

Order of this product item completed ? Yes No

Units... Cancel Continue

The status of the purchase order is controlled by the submenu <Completion of orders>. A correct purchase status is important because it affects the accuracy of the management information (e.g. stock on order).

The purchase order contains the status field <Completed> at product item level. Values are “Yes” or “No” (= default). When consolidating the receipt the user has already the possibility to change the status into “Yes” (see chapter 7.2.2). As a result, product items with this status value will no longer appear in the list when the button <Products to receive...> is pressed (see chapter 7.1.1). Also, it will no longer be possible to create a receipt of a “completed” purchase order.

Because of the possibility to have partial deliveries the control mechanism is built at two levels: at tender and at product/supplier level. Figures 7.12 and 7.13 present the screenshots.

Figure 7.12 Product item purchase status: tender level

Product item	ordered	arrived	balance	completed
Acetazolamide 250 mg - tab	2,000	2,000	0	N
Amoxicillin 250 mg tab	10,000	10,000	0	Y
Chloramphenicol 250 mg - tab	10,000	10,000	0	Y
Chloroform 125 mg/ml - bottle 500 ml - tab	5	5	0	Y
Diclofenac sodium 25 mg tab	1,000	1,000	0	N

The example of Figure 7.12 shows that the delivery of 3 products items is completed.

How to reject a receipt?

Registration of rejected quantities is done at stock code level.

43. Choose Menu Option <Receipt of goods → quality control → modify>.
44. Select the Purchase Order ID and click <Quality control...>

PO ID	description	date	PO No.	supplier
2	Test No. 2	10/05/2005	A122	Mission Pharma International
1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

45. Select the Receipt No. and click <Quality control...> to open the Quality control data form (Fig. 7.10).

Receipt No.	Receipt date	Delivery Note	Invoice
R/04-05/13	09/06/2005	D5567	22

46. Select the stock code and press the <Rejection...> button to open the pop-up form “Rejection” (Fig 7.9).
47. Enter the quantity rejected for this stock code and click <Continue...> to save and close the form.

When the whole batch is to be rejected, select “Yes” of the field “Reject whole batch?”. In the example this would mean that the product item “Acetolamide – 250 mg – tin 100 tabs” with batch number “L12231” is rejected.

How to consolidate a receipt?

48. Verify that the rejected goods have been entered.
49. Choose Menu Option <Receipt of goods → quality control → consolidation>.
50. Select the Purchase Order ID and click <Consolidation...>

PO ID	Description	Date	PO No.	Supplier
2	Test No. 2	10/06/2005	A122	Mission Pharma International
1	Test No. 1	09/06/2004	PO 1122	Central Medical Stores

51. Select the Receipt No. and click <Consolidation...> to open the Quality control data form (Fig. 7.11).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
	R/04-05/13	09/06/2005	D5567	22

52. Select the stock code and click <Consolidate...> to open to pop-up menu <Consolidation>
53. There are several options:
 - a. If you want to consolidate the selected stock code only: select “Consolidate whole batch? - No” (This is SIGMED Lite’s default)
 - b. If you want to consolidate all stock codes with the same selected batch number: select “Consolidate whole batch? - Yes”
 - c. If you want to consolidate all product items of the receipt: select “Consolidate this receipt? - Yes”. Note that this option overrules the “batch” option.
54. Select “Order of this product item completed? – Yes” if there will be no more receipts of this product item.
55. Repeat step 52 through 54 for the other stock codes.

How to change the status of a purchase – product/supplier level?

56. Choose Menu Option <Receipt of goods → quality control → completion of orders>.
57. Select the Purchase Order ID and click Continue...> to open the Product item purchase status form (Fig 7.12)

	PO ID	Description	date	PO No.	supplier
▶	2	Test No. 2	10/05/2005	A122	Mission Pharma International
	1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

58. Select the product item and click <Completion order - supplier...> to change the status the product. This button acts as a toggle function.

How to change the status of a purchase – purchase order level?

59. Choose Menu Option <Receipt of goods → quality control → completion of orders>.
60. Select the Purchase Order ID and click Continue...> to open the Product item purchase status form (Fig 7.12)

	PO ID	Description	date	PO No.	supplier
▶	2	Test No. 2	10/05/2005	A122	Mission Pharma International
	1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

61. Click <Completion order: Yes...> to change the status of *all* listed product items into “Yes”
62. Click the <Completion order: No...> button to change the status of *all* listed product items into “No”

7.3 Cost price

Stock valuation is based on the cost price of the item. The cost price is defined as the purchase price plus the additional costs. Additional costs are all costs, which belong to the same receipt (or shipment/delivery).

Figure 7.14 Overview of cost price

Item code	Product item	Purchase price	Cost price real	Estimate
A0377	Salbutamol-1mg tab	0.0021	0.0033	0.0023

Additional costs constitute three categories: *Local Transport*, *Procurement* and *Clearance* (Fig. 7.15). Costs are expressed in the local currency and converted to the base currency.

Figure 7.15 Snapshot of Supplier’s Invoice data form

The field “Real Costs (in %)” indicates the additional costs as percentage of the supplier’s invoice amount. In the example of Fig. 7.15 the real costs represent 4 % of the purchase value (USD 190.92).

In reality, most of the additional costs will not be known at the moment of consolidation of the receipt. Invoices may be sent some weeks later. For this reason you could use an estimate. This estimate must be entered in the field “Estimated Cost (in %)” (Fig 7.15). The default value is set at 10 % (see also Chapter 5.1.3 – *Default values*).

By means of two examples it will be demonstrated how SIGMED Lite calculates the cost price of the product items based on the real additional costs of each receipt. Subsequently, it is shown how SIGMED Lite calculates the average product item cost price for a given period, which could be used to determine the sales price.

Example I.

The first example is based on the receipt of two items A and B with a total purchase price (TPP) of USD 580 (Table 7.1). The additional costs of this receipt amount to USD 60 (Table 7.2). The additional costs are distributed over the two product items according to the relative value of each product item. This relative value is expressed as a weighing factor W (= Units * Unit Purchase Price / Total Purchase Price) (Table 7.3).

Table 7.1 Receipt Purchase order No I.

Item	Units	Unit Purchase price (USD)	Total (USD)
A	10	18.00	180
B	20	20.00	400
Total (USD)			580

Total purchase cost = USD 580

Table 7.2 Receipt Purchase order No I – Additional Cost (USD)

	Total (USD)
Transport	20
Clearance	40
Total (USD)	60

Total additional cost (TAC) = USD 60

Step 1. Calculate the weighing factor W

$$W = \text{Units} * \text{UPP} / \text{Total}$$

Table 7.3 Weight factor

Item	Units	Unit Purchase price (USD)	Total (USD)	W
A	10	18.00	180	0.31
B	20	20.00	400	0.69
Total (USD)			580	

Step 2. Calculate the Additional Cost per item (= W * TAC)

Table 7.4 Additional Cost

Item	Units	Unit Purchase price (USD)	Total (USD)	W	Additional Cost (W * TAC) (USD)
A	10	18.00	180	0.31	18.62
B	20	20.00	400	0.69	41.38
Total (USD)			580		60

Step 3. Calculate the Unit Cost Price

Table 7.5 Unit Cost Price

Item	Units	Unit Purchase price (USD)	Additional Cost / Unit (USD)	Unit Cost Price (USD)
A	10	18.00	1.86	19.86
B	20	20.00	2.07	22.07

Example 2

A second delivery of the same supplier takes place a few months later. Product item A is again part of the shipment.

Table 7.6 Receipt Purchase order No II.

Item	Units	Unit Purchase price (USD)	Total (USD)
A	30	18.00	540
C	100	50.00	5000
Total (USD)			5540

Total purchase cost = USD 5540

Table 7.7 Receipt Purchase order No II – Additional Cost (USD)

	Total (USD)
Transport	40
Clearance	80
Total (USD)	120

Total additional cost (TAC) = USD 120

Step 1. Calculate the weighing factor W

$$W = \text{Units} * \text{UPP} / \text{Total}$$

Table 7.8 Weight factor

Item	Units	Unit Purchase price (USD)	Total (USD)	W
A	30	18.00	540	0.10
C	100	50.00	5000	0.90
Total (USD)			5540	

Step 2. Calculate the Additional Cost per item (= W * TAC)

Table 7.9 Additional cost

Item	Units	Unit Purchase price (USD)	Total (USD)	W	Additional Cost (W * TAC) (USD)
A	30	18.00	540	0.10	11.70
C	100	50.00	5000	0.90	108.30
Total (USD)			5540		120.00

Step 3. Calculate the Unit Cost Price

Table 7.10 Unit Cost Price

Item	Units	Unit Purchase price (USD)	Additional Cost / Unit (USD)	Unit Cost Price (USD)
A	30	18.00	0.39	18.39
C	100	50.00	1.08	51.08

The Unit Cost Price of product A varies from USD 18.39 (example 1) till USD 18.86 (example 2).

It is now possible to calculate the weighed average cost price of each product item for a given period. Assuming that there are no more deliveries of product item A, we can now calculate the average cost price of this item.

Table 7.11 Average Unit Cost Price

Purchase Order	Units Item	Unit Purchase price (USD)	Total PP USD	Unit Cost Price (USD)	Total Cost Price (USD)
	A				
I	10	18.00	180	19.86	198.60
II	30	18.00	540	18.39	551.72
Total	40		720		750.32
Average				18.76	

The weighed average cost price of product item A equals to $18.00 + (750.32 - 720) / 40 = 18.76$, which is 4.2 % of the total purchase price.

How to calculate the estimated cost price?

It should be understood that, the first calculation by SIGMED Lite is always related to the estimated cost price. This cost price can be calculated only once.

Subsequent cost price calculations refer to the real cost price. This will have no influence on the stock value.

63. Choose Menu Option <Receipt of goods → cost price → calculation>.
64. Select the Purchase Order ID and click Continue...> to open the Product item purchase status form (Fig 7.12)

PO ID	Description	date	PO No.	supplier
2	Test No. 2	10/06/2005	A122	Mission Pharma International
1	Test No. 1	26/11/2004	PO 1122	Central Medical Stores

65. Select the Receipt No. and click <Cost price...> to open the Supplier's Invoice data sheet (Fig 7.15)

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
	R/04-05/13	09/06/2005	D5567	22

66. Press <Update>, enter the value for the field “Estimated Costs (in %)” and click <save>.
67. Click the button <Cost price...> to invoke the calculation and to open the form with the results (Fig. 7.14). The user will be asked to confirm this action:

The cost price will be calculated with an estimated (fixed) additional cost percentage of 10 %. Are you sure?

How to calculate the real cost price?

After the estimated cost price has been calculated (see 7.6.1.3), all further calculations are related to the real cost price.

68. Choose Menu Option <Receipt of goods → cost price → calculation>.
69. Select the Purchase Order ID and click Continue...> to open the Product item purchase status form (Fig 7.12)

PO ID	Description	Date	PO No.	Supplier
2	Test No. 2	10/06/2005	A122	Mission Pharma International
1	Test No. 1	20/11/2004	PO 1122	Central Medical Stores

70. Select the Receipt No. and click <Cost price...> to open the Supplier's Invoice data sheet (Fig 7.15).

PO ID and description	1 - Test No. 1			
Purchase Order	PO 1122			
Supplier	Central Medical Stores			
	Receipt No.	Receipt date	Delivery Note	Invoice
▶	R/04-05/13	09/06/2005	D5567	22

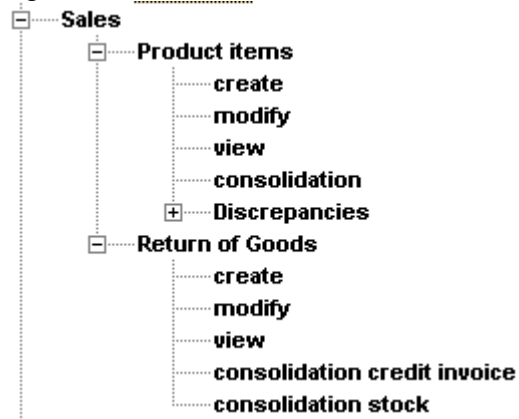
71. Press <Update>, enter the value for the fields “Clearance”, “Procurement”, “Transport” and click <save>. Note that costs are expressed in the local currency.

72. Click the button <Cost price...> to invoke the calculation and to open the form with the results (Fig. 7.14). The user will be asked to confirm this action

8 Sales

The sales menu constitutes 2 sub-menus: Product Items and Return of Goods (Fig. 8.1).

Figure 8.1 Menu Sales



The subsequent steps of a sales transaction is as follows: after entering the List of Requisition, the user is able to print successively the:

1. picking list;
2. delivery list;
3. invoice.

The picking list is created on the basis of the **First Expired First Out (FEFO)** principle. SIGMED Lite is able to register discrepancies in stock, which arise when the number of units to pick (Picking List) is greater than the actual number of units in stock.

SIGMED Lite allows the user to register the return of goods by the customer. A credit invoice is created. Even product items can be put back to the stock. In the following sub-chapters the creation of a sales order will be described.

8.1 Creation of the sales order

The function of the menu option *Sales* is to register the distribution of commodities to customers/patients

In case the demanded quantity could not be issued because of an out-of-stock situation a Certificate of Non-availability could be printed and submitted to the customer.

The figures 8.2 shows the Sales Order data form.

Figure 8.2. Sales Order data form

The screenshot shows the 'SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Sales (Whole stock)]' window. It features a menu bar with 'Close', 'Cancel', 'Delete', 'Save', 'Update', 'Insert', 'Print', and 'Help'. The main form contains the following fields:

- Customer / Patient: CHPINI
- Sales order No.: S/04-05/4
- Requisition Serial No.: S114
- Product item: Chloramphenicol 250 mg - tab
- No. of Units ordered: 200
- No. of Units allocated: 200
- Stock position: 9,800
- Non-available: 0

Below these fields is a table with the following data:

item code	product item	stock	ordered	allocated	balance
A1112	Chloramphenicol 250 mg - tab	9,800	200	200	9,600

At the bottom of the form are two buttons: 'Customer : Patient...' and 'Assemble...'.

The sales order number (*S/04-05/14*) is generated automatically by SIGMED Lite. It comprises:

S / financial year / sequence number

This number is also the Delivery Note number and Invoice number.

In the Sales order data sheet the characteristics of the sales order are registered (e.g. Requisition Serial Number).

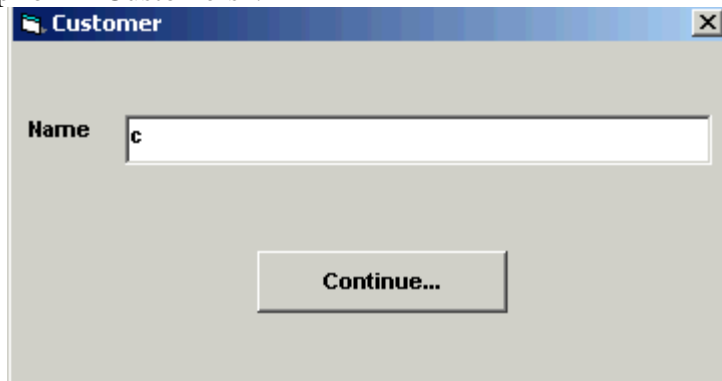
The customer's demand is entered in the field "No of Units ordered". The stock position of the selected product item is shown. The quantity to issue of the selected product item is entered in the field "No. of Units allocated".

The field "Non-available" is defined as: No. of Units ordered – No. of Units allocated.

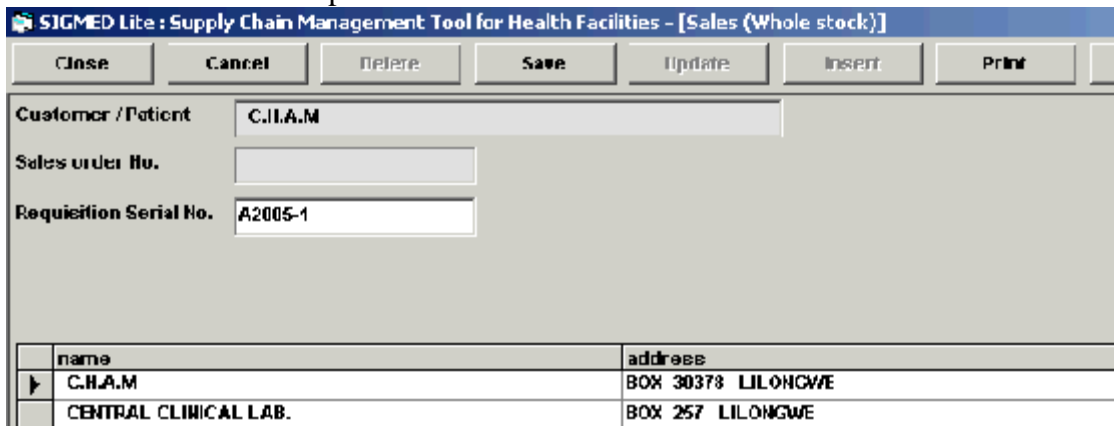
The button <Assemble> opens a new form from which the picking list, delivery note and invoice can be printed. The picking list is based on the First Expired First Out principle (FEFO).

How to create a sales order of product items?

1. Choose the menu option <Sales> → < Product items> → create> to open the pop-up form “Customers”.



2. Enter (part of) the name of the customer (or leave the field “Name” blank) and click <Continue...> to open the list of Customers.



Choose a customer. Create the customer first if the customer does not exist. In this case the sales order cannot be created in SIGMED Lite.

Fill in the field “Requisition Serial No”.

3. Click <Save> of the top menu button bar to save the entry and to open the pop-up form “product name”.

4. Press <Cancel...> or enter search criteria (product name or item code) in the pop-up menu and click <Continue...> to list the product items:

item code	product item	stock	ordered	allocated	balance
A0004	Acetazolamide 250 mg - tab	88,638	38	38	88,600

5. Select the product item and fill in the following fields:
 - No of Units ordered
 - No. of Units allocated
6. Click <Save> of the top menu button bar.
7. Clicking <Insert> of the top menu button bar for the other product items. Click <product items> to open the pop-up form “product name” (see Step 4).
8. The <Delete> and <Update> buttons of the top menu bar are enabled to modify the sales order.
 - Delete: Select the product item and click <Delete>. SIGMED Lite asks to confirm the deletion.
 - Update: Select the product item and click <Update>, enter the changes and click <Save>.

The button <Customer...> provides additional information about the customer.

9. Click <Assemble...> to proceed with the picking list.

How to modify or delete a sales order?

10. Choose the menu option <Sales> → <Product items> → modify> to open the *Customers – sales* form (Fig 8.3)

Figure 8.3 Customers – sales form

Invoice number	date	customer	serial req. no.	value (RWS)
5014-1154	25/10/2012	C.I.L.A.M	2015-123	0.250.00

11. Click <Customer...> to open the query form and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>:

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

It is evident that only non-consolidated sales orders are shown.

12. Select the invoice number and click <Sales order...> to open the Sales order data form (Fig. 8.2).
13. Click <Insert> when you want to add a product item to the sales order. Go to step 4.
14. The <Delete> and <Update> buttons of the top menu bar are enabled to modify the sales order.
 - Delete: Select the product item and click <Delete>. SIGMED Lite asks to confirm the deletion.
 - Update: Select the product item and click <Update>, enter the changes and click <Save>.

8.2 Assemble

Figure 8.4 shows the product item(s) of the sales order. By default, the quantity picked equals the quantity allocated.

Figure 8.4 Product item list - sales order

item code	product item	ordered	allocated	picked
A0001	Acetazolamide - tab - 250 mg	24	24	24
A0012	Folic acid 5 mg tab	10	0	0
A0009	Amoxicillin 250 mg - tab	200	200	200

Three buttons are available for further processing: <Picking List>, <Delivery Note> and <Invoice>. If required, the non-availability report can be printed:

.

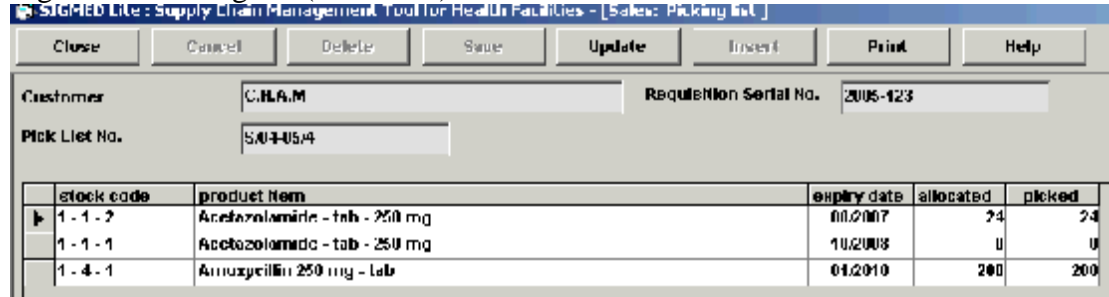
Figure 8.5 Non-availability report

Pharmacy AMC Hospital		Certificate of NON - AVAILABILITY	
PO Box 22423 1100 AG Amsterdam		Salee order no.	5/04-05/4
		Serial No. Requisition	2005-123
		Customer	C.H.A.M - LILONGWE
		Date sales order	25/03/2005
Warehouse	Central Store		
Item Code	Product item	Number of units ordered	Number of units non-available
AM012	Folic acid 5 mg - tab	10	10

8.2.1 Picking list

When the requisition form is entered, SIGMED Lite generates a picking list based on the FEFO principle (Fig 8.6).

Figure 8.6 Picking list (electronic)



The picking list is printed and the respective product items are assembled (at stock code level). The picking List of Figure 8.7 indicates that 24 Units of stock code “1 – 1 – 2” and 200 Units of stock code “1 – 4 – 1” should be picked. Expiry date and batch number are also printed. The quantity picked is noted on the List.

Figure 8.7 Picking List (printed)

Pharmacy AMC Hospital		PICKING LIST			
PO Box 22423 1100 AG Amsterdam		Salee Order No.	5/04-05/4	Date	25/03/2005
		Serial Requisition No.	2005-123		
Warehouse	Central Store	Customer	C.H.A.M - LILONGWE		
Item Code	Product Item	stock code	batch no	expiry date	Number of units to be picked
AM001	Acetazolamide 100 mg 5/04-05/4	1 - 1 - 2	U1231	01/2007	24
AM002	Amoxicillin 250 mg - tab	1 - 4 - 1	K123	01/2010	200

The electronic picking list (Fig. 8.6) shows all available stock codes, while the printed picking list only contains the codes to pick (Fig. 8.7).

Stock discrepancies are entered in SIGMED (Figure 8.8). This is the case when the stock code is not found (stock-out), or the real quantity differs from that of the picking list.

Figure 8.8 Discrepancies picking form

Sales: Picking list - Discrepancies picking (Whole stock)

Product item: Acetazolamide - tab - 250 mg

Stock code: 1 - 1 - 2

Quantity to pick: 24 Stock position: 97

Quantity picked: 22

Reason: missing

Picker: gka

Buttons: Cancel, Continue

In our example two units of stock code “1 – 1 – 2” were missing. Consolidation of these discrepancies is done through the sub-menu “Discrepancies”

A sales discrepancy report is available (Fig. 8.9).

Figure 8.9 Sales discrepancy report

Pharmacy AMC Hospital		Sales- Discrepancy Report (picking list)					
PO Box 22423 1109 AG Amsterdam		Sales Order No.: 8/04-05/4		Date: 25/03/2005		Picker: gka	
Warehouse: Central Store		Serial Requisition No.: 2009-123		Customer: C.H.A.M - LILONGWE			
Code	Product item	stockcode	batch no	expiry date	Number of units		remark
					to pick	picked	discrepancy
AB004	Acetazolamide - tab - 250 mg	1 - 1 - 2	1122/11	01/2/017	24	22	2 missing

In case of a stock discrepancy, the user should assign manually the remaining quantity by selecting another stock code (if present) in order to comply with the allocated quantity.

How to print a picking list?

15. Choose the menu option <Sales> → <Product items> → modify> to open the *Customers – sales* form (Fig 8.3)
16. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

It is evident that only non-consolidated sales orders are shown.

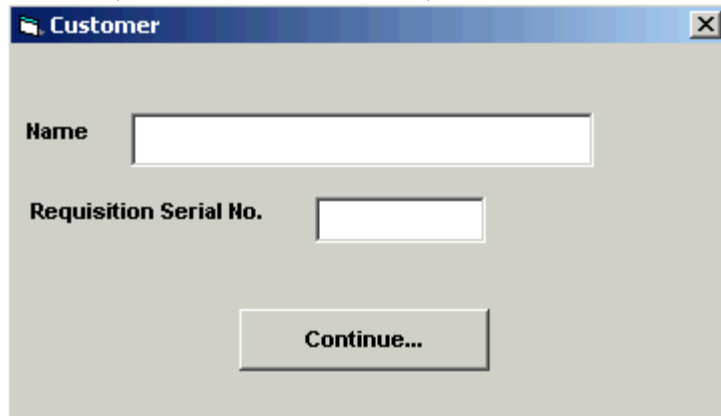
17. Select the invoice number and click <Sales order...> to open the Sales order data form (Fig. 8.2).
18. Click <Assemble...> to open the Product item list - sales order form (Fig. 8.4).
19. Click <Picking list...> to open the picking list form (Fig. 8.6).
20. Select <Print> to open the print option form and select “Picking list”

Report signatures and company address can be changed (see Chapter 5.1.3).

How to modify a picking list?

21. Choose the menu option <Sales> → < Product items> → modify> to open the *Customers – sales* form (Fig 8.3)

22. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.



The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

It is evident that only non-consolidated sales orders are shown.

23. Select the invoice number and click <Sales order...> to open the Sales order data form (Fig. 8.2).
24. Click <Assemble...> to open the Product item list - sales order form (Fig. 8.4).
25. Click <Picking list...> to open the picking list form (Fig. 8.6).
26. Select the stock code and click the <Update> button of the top menu bar to open the pop-up form < Discrepancies picking> (Fig.8.8).
27. Enter the fields “Quantity picked”, “Reason” and “Name of picker” and click <Continue...> to save or <Cancel...> to close without saving. The result is visible in the table.

Customer	C.H.A.M	Requisition Serial No.	21005-120	
Pick List No.	504-05.4			
stock code	product item	expiry date	allocated	picked
1-1-2	Acetazolamidc - tab - 250 mg	08/2007	23	23

28. If other stock codes are available select the stock code according the FEFO principle and click the <Update> button of the top menu bar.
29. Click <Print> to print to new picking list (see Step 20).

How to delete a picking list?

Picking Lists can only be deleted by removal of product items from the Sales Order Item List (see Chapter 8.1.2.2).

8.2.2 Delivery Note

After picking the Picking List becomes a Delivery Note. The Delivery Note number is the same as the sales order number.

The Delivery Note is printed, indicating item code, stock code, batch number, expiry date and No. of Units of each product item. This delivery note is signed by the customer (Fig. 8.9).

Figure 8.9 Delivery Note

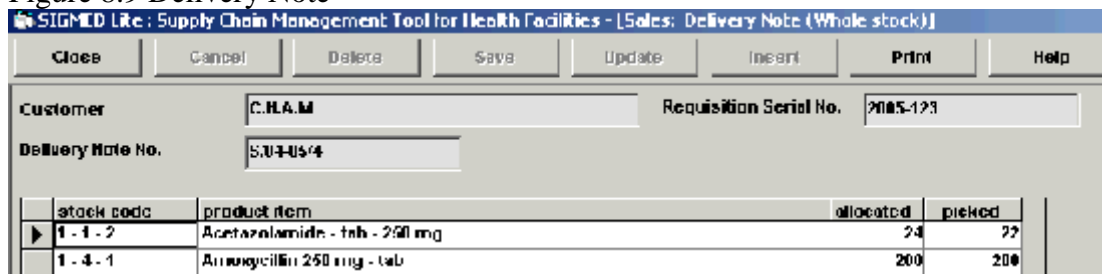


Figure 8.10 Delivery Note (report)

Pharmacy AMC Hospital		DELIVERY NOTE			
PO Box 22423		Sales Order No.: 5/0405/4			
1100 AG Amsterdam		Date: 26/03/2005			
		Serial Requisition No.: 2005-123			
Warehouse: Central Store		Customer: C.H.A.M - ULDONWE			
Item Code	Product Item	stockcode	batch no.	expiry date	Number of units delivered
A0004	Acetazolamide - tab - 250 mg	1-1-2	L12231	08/2007	22
A0030	Amoxicillin 250 mg - tab	1-1-1	K4195	04/2010	200

Report signatures and company address can be changed (see Chapter 5.1.3).

How to print a Delivery Note?

30. Choose the menu option <Sales> → <Product items> → modify> to open the *Customers – sales* form (Fig 8.3)
31. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The screenshot shows a standard Windows-style dialog box titled "Customer". It contains two text input fields. The first is labeled "Name" and the second is labeled "Requisition Serial No.". Below these fields is a button labeled "Continue...".

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

It is evident that only non-consolidated sales orders are shown.

32. Select the invoice number and click <Sales order...> to open the Sales order data form (Fig. 8.2).
33. Click <Assemble...> to open the Product item list - sales order form (Fig. 8.4).
34. Click <Delivery note...> to open the Delivery Note form (Fig. 8.9).
35. Click <Print ...> to print the Delivery Note (Fig. 8.10).

How to modify a Delivery Note?

Delivery notes can only be modified by changes in the Sales Order Item List (see Figure 8.2, Chapter 8.1.1.1)

How to delete a Delivery Note?

Delivery notes can only be deleted by removal of product items from the Sales Order Item List (see Chapter 8.1.1.2)

8.2.3 Invoicing

Figure 8.10 shows the invoice which is based on the delivery note. The invoice is expressed in both the local currency as well as in US dollars if the local currency and base currency are not the same (Fig. 8.10). In this case the applied exchange rate is shown as well.

Figure 8.10 Invoice form

Item Code	Product Item	No. of Units	SP / Unit	Amount	SP / Unit	Amount
A0004	Acetazolamide - tab - 250 mg	22	347.91	7,654.02	3.15	693.00
A0008	Amoxicillin 250 mg tab	200	331.35	66,270.00	3.00	600.00

Subtotal	MKD	73,021.02	USD	693.00
Handling fee (%)	10	Handling fee	6,627.00	60.00
Surtax (%)	11	Surtax		
Total	MKD	80,554.02	USD	763.00

If a handling fee and surtax are applied depends on the settings made during the registration of the receipts (see Figure 7.4, Chapter 7.1)

The user can modify the handling fee % and surtax %. Figure 8.11 shows the printed customer invoice.

Figure 8.11 Customer Invoice

Pharmacy AMC Hospital
 PO Box 22422
 1100 AU Amsterdam

INVOICE NO: 5010001
Serial Requisition No.: 2005-122

Date: 26/03/2006 00:00:00
Customer: C.H.A.M LILONGWE
Delivered to: C.H.A.M LILONGWE
Mode of payment: cheque

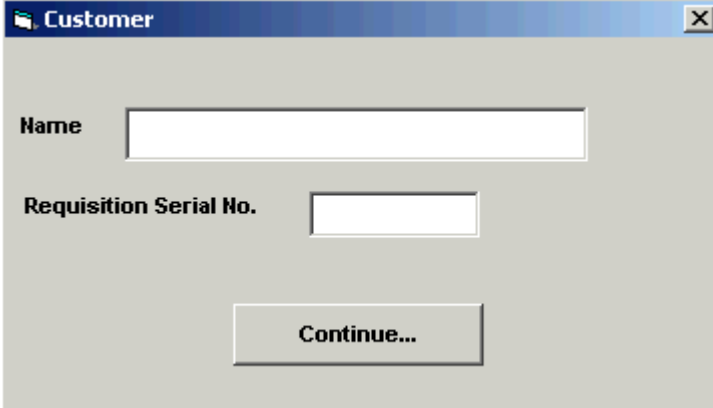
Warehouse: Central Store

Item Code	Product item	stockcode	Batch number	Expiry date	Number of units	Unit price	Value
						MKD	USD
A0004	Acetazolamide - tab - 250 mg	1 - 1 - 2	112201	00/2007	22	347.91	7,654.02
A0008	Amoxicillin 250 mg - tab	1 - 4 - 1	0845	01/2010	200	331.35	66,270.00
						Sub-Total	73,021.02
						[10.00 %]	6,627.00
						Total	79,648.02

The stock codes, batch number and expiry date of the product item are printed on the invoice.

How to print an invoice?

36. Choose the menu option <Sales> → <Product items> → modify> to open the *Customers – sales* form (Fig 8.3)
37. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.



The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

It is evident that only non-consolidated sales orders are shown.

38. Select the invoice number and click <Sales order...> to open the Sales order data form (Fig. 8.2).
39. Click <Assemble...> to open the Product item list - sales order form (Fig. 8.4).
40. Click <Invoice...> to open the picking list form (Fig. 8.10).

The default values for handling fee and surtax are used. These default values can be changed (see Chapter 5.1.3). However, these values for the selected sales order can also be changed in this form: just fill in the new values and click <Save>.

41. Click <Print ...> to print the invoice (Fig. 8.11).

How to delete an invoice?

Invoices can only be deleted by removal of product items from the Sales Order Item List (see Chapter 8.1).

8.3 Consolidation

Like all other stock transactions in SIGMED Lite the Sales order must be consolidated in order to update the stock of the product item. Stock discrepancies, discovered during the picking process, could be consolidated as well. This can only be done before consolidation the sales order (Fig. 8.12). The stock discrepancies are registered as stock adjustment (see chapter 9.1).

Figure 8.12 Picking List – Discrepancies picking

stock code	product item	allocated	picked	difference
1-1-2	Acetazolamidic - tab - 250 mg	21	22	2

How to consolidate a Sales order?

42. Choose the menu option <Sales> → <Product items> → consolidation> to open the *Customers – sales* form (Fig 8.3)
43. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

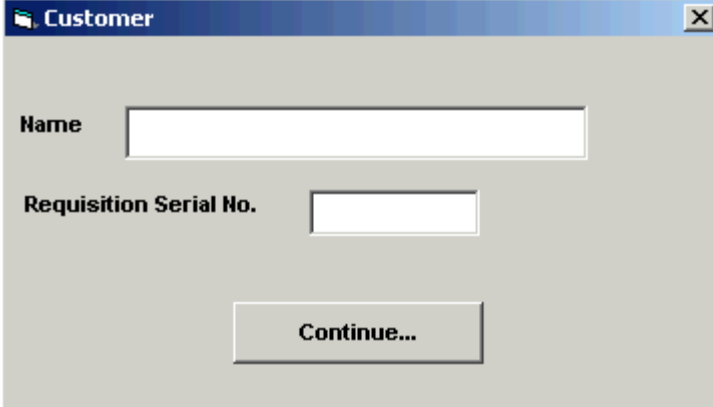
The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

Select the invoice number and click <Consolidate...>. In case of stock discrepancies SIGMED Lite shows a message that these discrepancies could be consolidated. The stock discrepancies are registered as stock adjustment (see chapter 9.1).

How to consolidate a stock discrepancy - sales order?

44. Choose the menu option <Sales> → <Product items> → Discrepancies -> consolidation> to open the *Customers – sales* form (Fig 8.3)
45. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.



The screenshot shows a window titled "Customer" with a close button in the top right corner. Inside the window, there are two text input fields. The first is labeled "Name" and the second is labeled "Requisition Serial No.". Below these fields is a button labeled "Continue...".

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

46. Select the invoice number and click <Sales order to open the Discrepancies Picking List (Fig 8.12).
47. Click <Consolidate...> and confirm.

8.4 Return of goods

Distributed commodities might be taken back. For these cases SIGMED Lite is able to generate a credit invoice.

Although not desirable, SIGMED Lite could even put returned product items back to stock. Figure 8.13 shows the data entry form for the return of goods. It is possible to create more than one credit invoice.

Figure 8.13 Return of goods data form

Customer	C.H.A.M	Requisition Serial No.	2005-123
Sales order No.	S/04-05/4		
Product item	Acetazolamide - tab - 250 mg		
Stock code	1-1-2	Item Code	A0004
Date	31/03/2005	Reason	Damaged
No. of Units	1	Put away to stock?	<input type="radio"/> No <input type="radio"/> Yes

item code	product item	delivered	returned	credit invoice
1-1-2	Acetazolamide - tab - 250 mg	22	1	S/04-05/4/C1

Figure 8.14 shows the credit-invoice. The format for the credit invoice number is defined as the Invoice Number + “/CI” + sequence number.

Figure 8.14 Credit Invoice for Sales Order No. S/04-05/4/C1

Customer	C.H.A.M	Requisition Serial No.	2005-123
Credit Invoice No.	S/04-05/4/C1		

Item Code	Product item	No. of Units	MK	
			SP / Unit	Amount
A0004	Acetazolamide - tab - 250 mg	1	347.91	347.91

Subtotal	347.91
Handling fee (%)	10
Handling fee	3.478
Surtax (%)	0
Surtax	
Total MK	382.70

In the example of Figure 8.14 1 unit of “Acetolamide – 250 mg ” has been taken back; the credit invoice number is “S/04-05/4/C1”.

The last step of this module is the consolidation of the credit invoice. After consolidation changes are not longer possible.

Figure 8.15 shows an example of the consolidation form. If there are returned product items, which are put back to stock, the user should consolidate this transaction first.

Figure 8.15 Credit invoice: consolidation

How to create a credit invoice?

A credit invoice can only be created when the sales order has been consolidated.

- 48. Choose the menu option <Sales> → Return of goods → create> to open the *Customers – sales* form (Fig 8.3)
- 49. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales

- All = all sales

50. Select the invoice number and click <Sales order...> to open Return of goods data form (Fig. 8.13).

51. Click <insert> to list the product items of the sales order.

52. Select the product item and click <Update> to open the data entry form:

The screenshot shows a window titled "Sales: Return of goods" with the following fields and values:

- Product item: Acetazolamide - tab - 250 mg
- Stock code: 1 - 1 - 2
- Qty delivered: 22
- Date: 31/03/2005
- Reason: damaged
- No. of Units: 1
- Put away to stock?: No Yes

Buttons: Cancel, Continue

53. Enter the fields:

1. reason
2. No. of Units

54. Select the field "Put away to stock": Yes or No
By default the value is "No".

55. Click <Continue> to save and close the data entry form

56. Repeat step 52 through 56 for other product items

57. Click <Credit invoice...> to open the credit invoice form (Fig 8.14).

Note the SIGMED Lite has automatically generated a credit invoice number, which is defined as Invoice number + "/CI" + sequence number.
No changes can be made in this form.

58. Click <Print...> to print the credit invoice.

How to modify a credit invoice?

59. Choose the menu option <Sales> → Return of goods → modify> to open the *Customers – sales* form (Fig 8.3)

60. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

61. Select the credit invoice number and click <Sales order...> to open Return of goods data form (Fig. 8.13).

62. Select the product item and click <update> to open the data entry form. Go to step 57.

How to delete a product item from a credit invoice?

This is only possible for non-consolidated credit invoices.

63. Choose the menu option <Sales> → Return of goods → modify> to open the *Customers – sales* form (Fig 8.3)

64. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

65. Select the credit invoice number and click <Sales order....> to open Return of goods data form (Fig. 8.13).

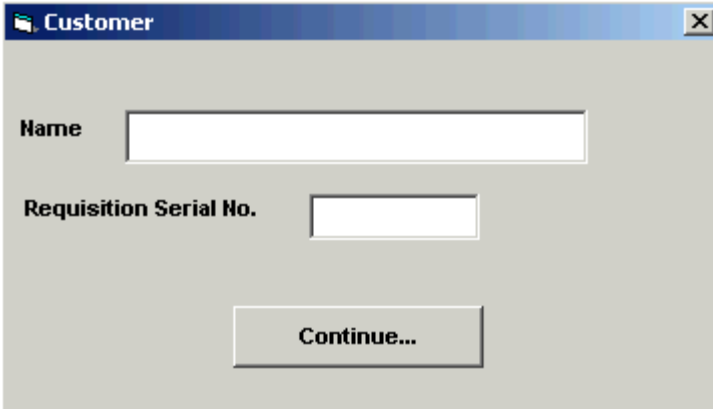
66. Select the product item and click <delete>.

How to add a product item to an existing credit invoice?

This is only possible when the credit invoice has not been consolidated yet.

67. Choose the menu option <Sales> → Return of goods → modify> to open the *Customers – sales* form (Fig 8.3)

68. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.



The image shows a software dialog box titled "Customer". It contains two text input fields. The first is labeled "Name" and the second is labeled "Requisition Serial No.". Below these fields is a button labeled "Continue...".

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

69. Select the credit invoice number and click <Sales order....> to open Return of goods data form (Fig. 8.13).

70. Select the product item and click <insert>. Go to step 54.

How to consolidate a credit invoice?

71. Choose the menu option <Sales> → Return of goods → consolidation credit invoice> to open the *Customers – sales* form (Fig 8.3)

72. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.

The screenshot shows a window titled 'Customer'. It contains two text input fields. The first is labeled 'Name' and the second is labeled 'Requisition Serial No.'. Below these fields is a button labeled 'Continue...'. The window has a standard Windows-style title bar with a close button in the top right corner.

The user of other search criteria is also possible. Click one of the following buttons:

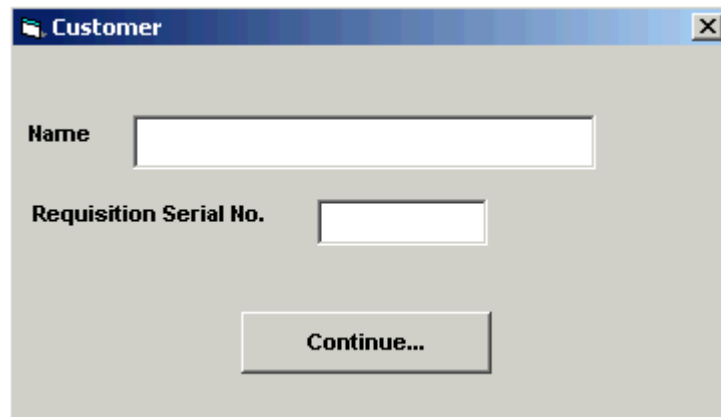
- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

73. Select the credit invoice number and click <Sales order....> to open Return of goods data form (Fig. 8.13).
74. Click <Credit Invoice> to open the Credit Invoice data sheet (Fig. 8.14).
75. Click <Consolidation...>.

If products items are taken back into stock, then this transaction should be consolidated first. See 8.4.3.3.

How to consolidate a stock update of a returned product item?

76. Choose the menu option <Sales> → Return of goods → consolidation stock> to open the *Customers – sales* form (Fig 8.3)
77. Click <Customer...> and enter the Requisition Serial number or (part of) the name of the customer (or leave the fields blank) and click <Continue...>.



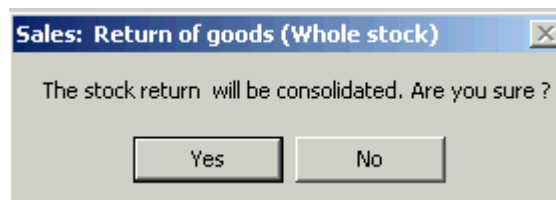
A screenshot of a software dialog box titled "Customer". It features a blue header bar with the title and a close button. Below the header, there are two input fields: "Name" and "Requisition Serial No.". A "Continue..." button is positioned at the bottom center of the dialog.

The user of other search criteria is also possible. Click one of the following buttons:

- NP = all non – paying customers
- Credit = all credit sales
- Cash = all cash sales
- All = all sales

78. Select the credit invoice number and click <Sales order....> to open Return of goods data form (Fig. 8.13).

79. Click <Consolidation> and confirm to consolidate.

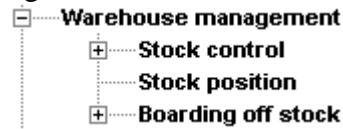


A screenshot of a software dialog box titled "Sales: Return of goods (Whole stock)". The dialog contains the text "The stock return will be consolidated. Are you sure ?" and two buttons labeled "Yes" and "No" at the bottom.

9 Warehouse management

Warehouse management in SIGMED Lite comprises the functions Stock Control and Boarding off stock (Fig. 9.1). Moreover, the sub-menu <Stock position> enables the user to monitor the products in stock (quantity and the expiry date).

Figure 9.1 Menu Warehouse management

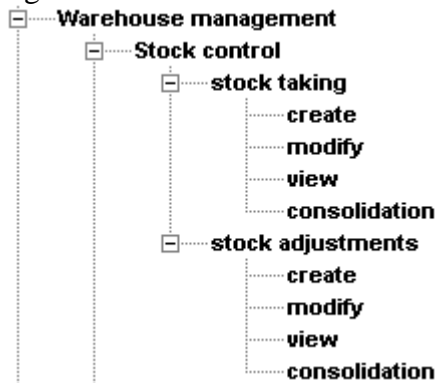


9.1 Stock control

Stock control constitutes 3 types: annual stock take, periodical stock take and stock adjustments. The first two types are found under the menu option <Warehouse management → Stock control → Stock taking>.

The latter type is meant for stock corrections of individual product items. The theoretical stock (SIGMED Lite) could differ from the real stock (physically present). These discrepancies occur e.g. when the indicated stock code of the picking list is not picked (see chapter 8.2).

Figure 9.2 Sub-menu Stock control



For periodical stock takes the user is able to select the product items or certain groups of product items like all Class A or all V(ital) product items (Fig. 9.3).

Figure 9.3 Periodical Stock Take selection form

Stock control

V/E/N/O V E N O

ABC - class A B C

Type of stock ...

Own selection Yes No

The selected product items are shown in the form presented by Figure 9.4. The current stock position is set at 0.

Figure 9.4 Selected product items for stock take

SIGMED Lite: Supply Chain Management Tool for Health Facilities - [Stock control: periodical stock take (Catalogue Items)]

Close Cancel Update Save Update Insert Print Help

Warehouse: Date of stock take: No.

No. of Units

Stock code: Batch number:

Current stock position: Units

Item code	Stock code	Product item	Batch number	Expiry date	Current stock position
A0004	1 - 1 - 1	Acetazolamide - tab - 250 mg	LK235	10/2008	0
A0004	1 - 1 - 2	Acetazolamide - tab - 250 mg	L12231	08/2007	0
A0009	1 - 4 - 1	Amoxicillin 250 mg - tab	H1432	01/2010	0
A0102	1 - 2 - 1	Chloramphenicol 250 mg - tab	16 - 1 L1	12/2008	0
A0102	1 - 2 - 2	Chloramphenicol 250 mg - tab	KL12-3	09/2007	0
000124	1 - 3 - 1	Chloroform - bottle 500 ml	0013-1	05/2006	0

SIGMED Lite prints an inventory product items report of the available stock (annual stock take) or selected stock (periodical stock take).

As shown by Figure 9.5 the item-code, description, stock code, the batch number, expiry date, stock code and the pack-size (of a complete package) of the product items are listed.

Figure 9.5 Listing product items.

Pharmacy AMC Hospital		Inventory Control (listing product items)		Periodical stock take	
Warehouse	Central Store	date	31/03/2006	Number	1
item code	item description	stock code	batch number	expiry date	No. of Units
<i>Labelogue items</i>					
A. Tablets and Capsules					
A0004	Acetazolamide - tab - 250 mg	1 - 1 - 2	L12231	08/2007	
A0001	Acetazolamide - tab - 250 mg	1 - 1 - 1	LR235	10/2008	
A0099	Amoxycillin 250 mg - tab	1 - 4 - 1	R1495	01/2010	
A0101	Chloramphenicol 250 mg - tab	1 - 2 - 2	KL12-3	09/2007	
A0102	Chloramphenicol 250 mg - tab	1 - 2 - 1	4S-4-L1	12/2008	
D. Raw materials					
D0124	Chloroform - bottle 500 ml	1 - 3 - 1	KL9-1	05/2007	

The process of stock registration in SIGMED Lite is for all three types the same: select the stock code of the product item and register the current stock position (Fig.9.6). For stock adjustments of individual product items the reason should also be registered (e.g. Quality control).

Figure 9.6 Stock take product item data sheet

Item code	Stock code	Product item	Batch number	Expiry date	Current stock position
A0001	1 - 1 - 1	Acetazolamide - tab - 250 mg	LR235	10/2008	0
A0001	1 - 1 - 2	Acetazolamide - tab - 250 mg	L12231	08/2007	70

The report “Inventory” shows the result of the data entry.

Figure 9.7 Stock take – Inventory report

Pharmacy AMC Hospital		Inventory Control -		Periodical stock take	
Warehouse	Central Store	date	31/03/2006	Number	1
item code	item description	stock code	batch number	expiry date	No. of Units
<i>Labelogue items</i>					
A. Tablets and Capsules					
A0004	Acetazolamide - tab - 250 mg (Eri q)	1 - 1 - 2	L12231	08/2007	70
A0001	Acetazolamide - tab - 250 mg	1 - 1 - 1	LR235	10/2008	0
A0099	Amoxycillin 250 mg - tab	1 - 4 - 1	R1495	01/2010	0
A0101	Chloramphenicol 250 mg - tab	1 - 2 - 2	KL12-3	09/2007	0
A0102	Chloramphenicol 250 mg - tab	1 - 2 - 1	4S-4-L1	12/2008	0
D. Raw materials					
D0124	Chloroform - bottle 500 ml	1 - 3 - 1	KL9-1	05/2007	0

After crosschecking of the data entry the stock take /adjustment should be consolidated. After consolidation the stock in SIGMED Lite equals the counted stock. Figure 9.8 shows the counted stock of the (selected) product item.

Figure 9.8 Stock control - consolidation

Warehouse: Central Store Date of stock take: 21/03/2005 No. 1

No. of Units: Acetazolamide - tab - 250 mg

Stock code: 1 - 1 - 1 Batch number: LK235

Current stock position: 960 Units

Item code	Stock code	Product item	Batch number	Expiry date	Current stock position
▶ A0004	1 - 1 - 1	Acetazolamide - tab - 250 mg	LK235	10/2006	960
	1 - 1 - 2	Acetazolamide - tab - 250 mg	L12291	06/2007	70
	1 - 4 - 1	Amoxicillin 250 mg - tab	K1435	01/2010	9000
	1 - 2 - 1	Chloramphenicol 250 mg - tab	46-41-1	12/2000	9500
	1 - 2 - 2	Chloramphenicol 250 mg - tab	K1-12-3	08/2007	9000
	1 - 3 - 1	Chloroform - bottle 500 ml	K134-1	05/2007	0

Buttons: Search... Consolidate... Miscellaneous...

Figure 9.9 Stock control - summary

Warehouse: Central Store Date of stock take: 30/12/2005

No. of Units

Stock code	Product item	Theoretical	Real
▶ 1 - 1 - 1	Acetazolamide - tab - 250 mg	937	930
	Acetazolamide - tab - 250 mg	70	70
	Amoxicillin 250 mg - tab	9000	9000
	Chloramphenicol 250 mg - tab	9500	9500
	Chloramphenicol 250 mg - tab	9000	9000
	Chloroform - bottle 500 ml	3	0

A summary stock control form and report are available as well (Fig. 9.9, 9.10). The form and report show the theoretical stock (before counting) and the (counted) real stock.

Figure 9.10 Stock Control Summary report

Pharmacy AMC Hospital		Inventory Control (discrepancy report)-Annual stock take							
Warehouse	Central Store	Date	31/03/2005 00:0	Number	1	No. of Units			
item code	item description	stock code	batch number	expiry date	balance stock take	stock take	discrepancy		
<i>Catalogue Item</i>									
A. Tablets and Capsules									
A1114	Acetazolamide tab 250 mg	1 - 1 - 2	L12231	UNLIM	73	70	3		
A0001	Acetazolamide - Tab - 250 mg	1 - 1 - 1	LR235	120005	987	980	-7		
A0030	Amoxicillin 250 mg - tab	1 - 4 - 1	K1415	11/07/01	8,11111	8,11111	0		
A1111	Chloramphenicol 250 mg tab	1 - 2 - 2	KL12-3	UNLIM	0,010	0,010	0		
A0103	Chloramphenicol 250 mg - Tab	1 - 2 - 1	45-4-L1	120005	990	990	0		
D. Raw materials									
D11124	Chloroform - bottle 500 ml	1 - 1 - 1	K114-1	120005	11	11	0		

How to create an annual stock take

Data entry of stock take data in SIGMED Lite comprises two phases. The first phase is to print a report of the product items to be counted. After counting and crosschecking the counted stock data is entered in SIGMED Lite (phase 2)

Phase 1.

1. Choose the menu option <Warehouse management → Stock control → stock taking → create> to open the stock take selection form

Annual stock take

Periodical stock take

Warehouse

Date of stock take

2. Select <Annual Stock take>, enter the date of the stock take and click <Save> to open the available product items form (Fig. 9.4). SIGMED automatically has generated a unique stock control number.
3. Click <Print > to print open the report options form:

Report options

Listing product items

Inventory report (count)

Discrepancy report

Continue...

4. Select the option “Listing product items” and click <Continue...> to print the report (Fig. 9.5).

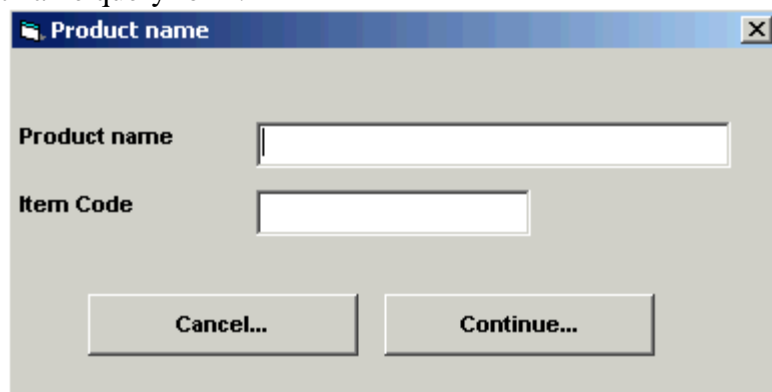
Carry out the counting and fill in the column “No. of Units” of the report.

Phase 2.

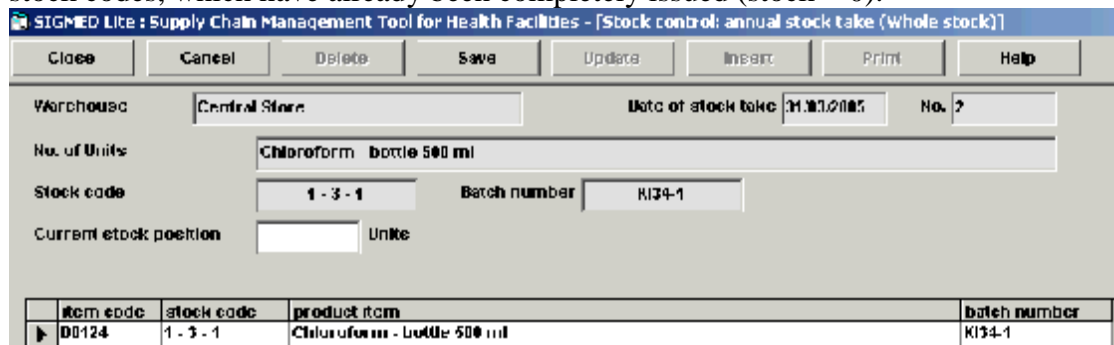
5. Choose the menu option <Warehouse management → Stock control → stock taking → modify> to open the stock take listing form:



6. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).
7. Select the stock code, click the <Update> button of the menu bar, fill in the field “Current Stock position” and click <Save>. The result is shown in the table.
8. Repeat step 7 for all other product items.
9. The button <Insert> of the top menu bar is enabled. Clicking opens the product name query form:



Enter (part of) the name and click <Continue...> and the table is filled with stock codes, which have already been completely issued (stock = 0).



10. Fill in the field “Current Stock position” and click <Save>. The result is shown in the table.
11. Click <Print > to print open the report options form and select the option “Inventory report (count)” to print the stock count.

How to modify an annual stock take

12. Go to step 5 through 11

How to delete an (annual) stock take

13. Choose the menu option <Warehouse management → Stock control → stock taking → modify> to open the stock take listing form:



14. Select the stock control number and click the <Delete...> button of the top menu bar. You should confirm your choice.

How to delete a product item from an annual stock take

It is not possible to delete a product item from the annual stock take item list because in this case all available product items are counted.

In the case of a periodical stock take however, removal of items is possible (see 9.1.2).

How to create a periodical stock take

Data entry of stock take data in SIGMED Lite comprises two phases. The first phase comprises selection of product items and printing a report of the product items to be counted. After counting and crosschecking the counted stock data is entered in SIGMED Lite (phase 2).

Phase 1.

15. Choose the menu option <Warehouse management → Stock control → stock taking → create> to open the stock take selection form

Annual stock take	<input checked="" type="radio"/>
Periodical stock take	<input type="radio"/>
Warehouse	Central Store
Date of stock take	31/03/2005

16. Select <Periodical Stock take>, enter the date of the stock take and click <Save> to open Periodical Stock Take selection form (Fig 9.3).

Selection criteria are:

- VEN classification
- ABC – class
- Type of stock
- Own selection
-

The product items attached to the VENO and ABC class always belong to the type of stock “Catalogue Items”.

The option “Own Selection” enables the user to select the product items within a type of stock.

Select one of the options and click <Continue...>. When the option “VENO”, “ABC – class”, “Type of stock” is chosen the table is filled with the corresponding product items (Fig. 9.4). SIGMED automatically has generated a unique stock control number.

The option “Own Selection” opens a form with available product items belonging to the selected type of stock.

Select the product item and click the button <Add to product list...>. Repeat this till all product items have been added and click <Close...> to open the form with the selected product items (Fig. 9.4).

17. Click <Print Product List...> to print to report “Inventory product items”.

Carry out the counting and fill in the column “No. of Units” of the report. Note that the content of whole, completed packages is easily determined because the pack size is already known. If desired, the number of whole, completed packages could be noted as well.

Phase 2.

18. Go to step 5 through 11

19. The <Delete>, <Update>, <Insert> buttons of the top menu bar are enabled to modify the sales order.

- Delete: Select the product item and click <Delete> to remove the product item from the list.

- Update: Select the product item and click <Update>, enter the changes and click <Save>.
- Insert: click <Insert> and go to step 22.

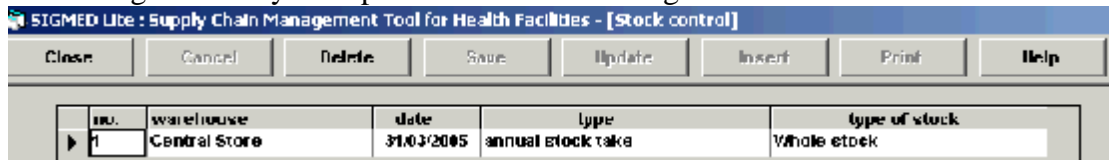
20. Click <Print Inventory...> to print the current stock of the selected product items (Fig. 9.7).

How to modify a periodical stock take

21. Go to step 5 through 11

How to add a product item to an existing periodical stock take

22. Choose the menu option <Warehouse management → Stock control → stock taking → modify> to open the stock take listing form:



23. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).

24. Select the stock code, click the <Insert> button of the menu bar to open the product item listing form.

25. Select the product item and click the button <Add to product list...>. Repeat this till all product items have been added and click <Close...> to open the form with the selected product items (Fig. 9.4).

26. Go to step 7 through 11.

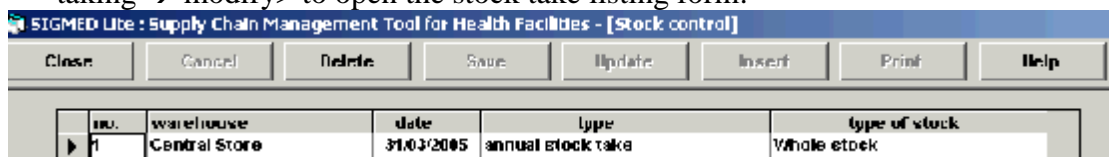
27. Click button “Products: Old batches/stock codes” to add batches with stock=0 to the inventory product item list. See step 9.

How to delete an annual stock take

28. See step 13

How to delete a product item from an periodical stock take

29. Choose the menu option <Warehouse management → Stock control → stock taking → modify> to open the stock take listing form:



30. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).
31. Select the product item and click the <Delete> button of the top menu bar to remove the product item from the list

How to create a stock adjustment

SIGMED Lite allows the creation of only one non-consolidated stock adjustment per day.

In case of a second stock adjustment the menu option <create> will modify the existing non-consolidated stock adjustment (by adding the product item to the existing list). When the first stock adjustment has been consolidated already, SIGMED Lite will create a new one.

32. Choose the menu option <Warehouse management → Stock adjustment → stock taking → create>.
33. Click the <Insert> button of the top menu bar to open the pop-up menu “Product name”. See step 9 through 11.
34. Click button “Products: Old batches/stock codes” to add batches with stock = 0 to the inventory product item list. See step 9. Select a reason for the discrepancy.

item code	stock code	description	batch number
A0004	1-1-2	Other	250 mg
A0004	1-1-1	Quality control	250 mg
A0038	1-1-1	Theft	tab
A0102	1-2-2	1 mg - tab	45-4-L1
A0102	1-2-1	1 mg tab	45-4-L1

35. Repeat step 33 for all other product items.
36. The <Delete> and <Update> buttons of the top menu bar are enabled to modify the sales order.
 - Delete: Select the product item and click <Delete> to remove the product item from the list.
 - Update: Select the product item and click <Update>, enter the changes and click <Save>.

37. Click <Print Inventory...> to print the current stock of the selected product items (Fig. 9.7).

How to modify a stock adjustment

38. Choose the menu option <Warehouse management → Stock adjustment → stock taking → modify> to open the stock take listing form:

no.	warehouse	date	type	type of stock
1	Central Store	31.03/2005	annual stock take	Whole stock

39. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).
40. Select the stock code (table), click the <Update> button of the top menu bar, enter the changes and click <Save>. The result is shown in the table.
41. Click <Print Inventory...> to print the current stock of the selected product items (Fig. 9.7).

How to add a product item to an existing stock adjustment

42. Choose the menu option <Warehouse management → Stock adjustment → stock taking → modify> to open the stock take listing form:

no.	warehouse	date	type	type of stock
1	Central Store	31.03/2005	annual stock take	Whole stock

43. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).
44. See step 33.

How to delete a stock adjustment

45. Choose the menu option <Warehouse management → Stock adjustment → stock taking → modify> to open the stock take listing form:

no.	warehouse	date	type	type of stock
1	Central Store	31.03/2005	annual stock take	Whole stock

46. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6) and click <Delete>.

How to delete a product item from a stock adjustment list

47. Choose the menu option <Warehouse management → Stock adjustment → stock taking → modify> to open the stock take listing form:

The screenshot shows a software window titled "SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Stock control]". Below the title bar is a menu bar with buttons: Close, Cancel, Delete, Save, Update, Insert, Print, and Help. Below the menu bar is a table with the following data:

no.	warehouse	date	type	type of stock
1	Central Store	31.03/2005	annual stock take	Whole stock

48. Select the stock control number and click <Continue...> to open the Stock take product item data form (Fig. 9.6).
49. Select the stock code (table) and click the <Delete...> button of the top menu bar.
50. Repeat step 47 for other product items.

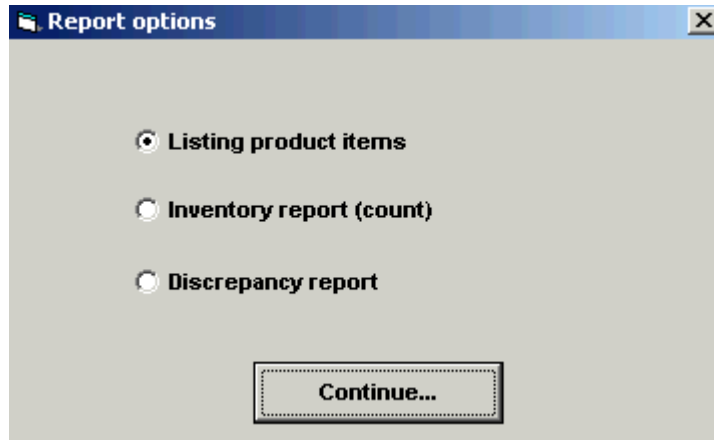
How to consolidate a stock take / adjustment

51. Choose the menu option <Warehouse management → Stock adjustment → stock taking → modify> to open the stock take listing form:

The screenshot shows a software window titled "SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Stock control]". Below the title bar is a menu bar with buttons: Close, Cancel, Delete, Save, Update, Insert, Print, and Help. Below the menu bar is a table with the following data:

no.	warehouse	date	type	type of stock
1	Central Store	31.03/2005	annual stock take	Whole stock

52. Select the stock control number and click <Continue...> to open the inventory form (Fig 9.8).
53. Click <Discrepancies...> to open the Stock Control summary form (Fig. 9.9).
54. Click <Print...> to print the report.
55. Click the <Close> button of the top menu bar to re-open the Stock take consolidation form (Fig. 9.8).
56. Click in <Consolidate...> and confirm your choice.
57. Click <Print > to print open the report options form:



58. Select the option “Discrepancy Report” and click <Continue...> to print the report (Fig. 9.10)

9.2 Stock position

This sub-menu provides information of the (theoretical) stock position of a product item at different levels: total (Fig. 9.11) or at stock code level (Fig. 9.12).

Figure 9.11 Total stock position

Product item	Acetazolamide - tab - 250 mg		
Product class	A. Tablets and Capsules		
Item code	A0004	ATC code	testcode

warehouse	stock	allocated	total
▶ Central Store	1,050	0	1,050
total			
	1,050	0	1,050

Batch numbers...

The total stock is divided into two parts: “stock” and “allocated”. The quantity “stock” is available for transactions (e.g. sales). The column “allocated” refers to product quantities assigned to transactions, which are not yet consolidated.

The information displayed by the figures 9.11 and 9.12 is also accessible via other forms (e.g. Procurement – List of Requirements, see Chapter 6.2).

Figure 9.12 Stock position at stock code level

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Stock position (Whole stock)]

Close Cancel Delete Save Update Insert Print Help

Product item: Acetazolamide - tab - 250 mg
 Product class: A. Tablets and Capsules Item code: A0004

stock code	warehouse	batch number	expiry date	in stock	No. of days		No. of units	
					stock	allocated	total	
1-1-?	Central Store	L12231	01/2007	▲	70	0	70	
1-1-1	Central Store	LK235	10/2008	125	980	0	980	

Suppliers... Total 1,050 0 1,050

The button <Suppliers...> on the form of Fig. 9.12 gives the user access to information about the supplier:

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Stock position: Suppliers (Whole stock)]

Close Cancel Delete Save Update Insert Print Help

Product item: Acetazolamide - tab - 250 mg
 Product class: A. Tablets and Capsules Item code: A0004

Stock code	Batch number	Expiry date	supplier	manufacturer	country
1-11	LK235	01/10/2008	Central Medical Stores	Manufactures X	THE NETHERLANDS
1-12	L12231	01/06/2007	Central Medical Stores	PARACETAMOL INC.	RSA

How to know the stock position of a product item

1. Choose the menu option <Warehouse management → Stock position> to open the product query form:

The screenshot shows a software window titled "Type of stock". At the top right of the window is a dropdown menu currently set to "Whole stock". Below this is a table with two columns: "item code" and "product item". The table is currently empty. At the bottom of the window, there are four buttons: "Product info...", "Inventory...", "Search...", and "ABC...".

2. Several query mechanisms are available:
 - type of stock
 - ABC-class
 - Product item (button <Search...>)

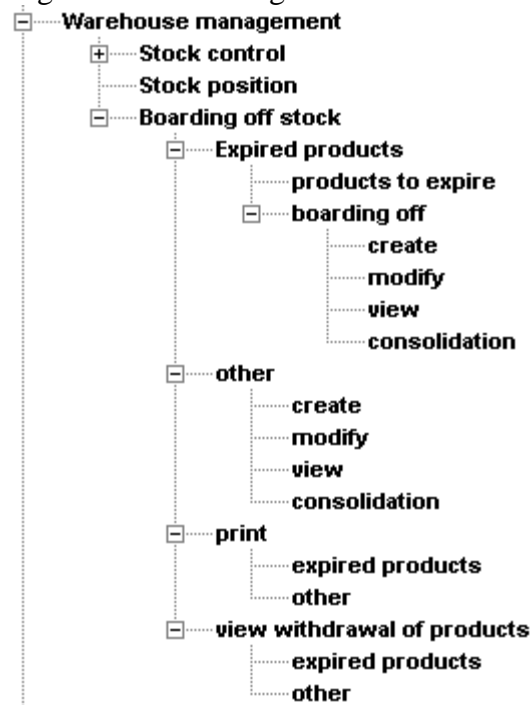
Select the type of stock; as a result all product items of the selection will appear in the table. For a refinement of this search click <Search...> and enter (part of) the name of the product item or Item code (or leave the fields blank) and click <Continue...>.

3. Click < Product info...> the access information of the selected product item .
4. Select the product item and click <Inventory...> to open the stock position form (Fig. 9.11).
5. Click the <Batch numbers...> button for more detailed information (Fig. 9.12).
6. Click <Print...> to print the stock position of the selected product item.

9.3 Boarding off

The withdrawal of product items (boarding off) constitutes two categories: 1) **expired** products (or products to expire) and 2) **other** (obsolete products, quality control, damaged, etc) (Fig. 9.13).

Figure 9.13 Boarding off menu



The registration in SIGMED Lite of boarding off product items is comparable with workflow of Stock Control (see 9.2: stock adjustment).

9.3.1 Category: Expired products

SIGMED Lite provides an important tool for managing product items that are expired or will expire in the near future. All product items to expire within 12 months from date are shown at real time. Based on this information the decision could be taken to board off the product item (at stock code level), which means that it will no longer belong to the stock.

Expiry dates are expressed as month – year (*mm-yyyy*). A product is expired when the current month exceeds the expiry month: a product item with expiry date “10/2006” means that on October 1st, 2006 the product expires. From this date it will no longer be available for sale.

In SIGMED Lite boarding off transactions do not require a lot of data entry. SIGMED Lite is able to board off products that are not yet expired. In this case SIGMED Lite assumes that all available units of the product item will be withdrawn from the stock. The form and correspondent report are illustrated by Figure 9.14 and 9.15, respectively.

Figure 9.14 Boarding off - products data sheet (category "expired")

Warehouse	Central Store	Boarding off date	01/01/2005
Product Item	Acetazolamide tab 250 mg		
Stock code	1-1-3	Item code	A0004
Approval No.	A4333		
Quantity	10	Type of stock	Catalogue items

Stock code	Product item	Batch number	Expiry date	No. of Units
1-1-3	Acetazolamide - tab - 250 mg	A344	10/2005	10

Figure 9.15 Report boarded off “expired” products

Pharmacy AMC Hospital Boarding off- product items

Warehouse: Central Store Page 1

Treasury Approval No.: A4333

Date: 01/01/2005

Item code	Item description	Stock code	Batch number	Expiry date	No. of Units	Description
<i>Catalogue items</i>						
A. Tablets and Capsules						
A1114	Acetazolamide - tab - 250 mg	1-1-3	A 344	10/2005	10	Expired

How to list product items that are expired or will expire in the near future?

Note that the listed product items still belong to CMS stock. Expired products are no longer available for sale.

1. Choose the menu option <Warehouse management → Boarding off stock → Expired products → products to expire> to list all products items already expired or to be expire within 12 months.

Stock code	Product item	In stock	Expiry date
1-1-3	Acetazolamide - tab - 250 mg	10	10/2005

2. Click <Print...> to print the report. This report shows all expired product items and those that will expired within 3 months

How to board off expired product items (or product items that will expire in the near future)?

3. Choose the menu option <Warehouse management → Boarding off stock → Expired products → boarding off → create> to open the boarding off product item data sheet (Fig 9.14).
4. Click <Products...> to open the pop-up menu “Product name”.

Several search fields are available:

- type of stock
- Product item name
- Item code
- ATC Code

Enter the search criteria and click <Continue...>. As a result all product items are shown in the table.

5. Select the stock code, fill in the field “treasury approval No.” and click the <Save> button of the top menu bar. The result is shown in the table (Fig 9.14).

Warehouse	Central Store	Boarding off date	01/01/2005
Product item	Acetazolamide - tab - 250 mg		
Stock code	1 - 1 - 3	Item code	A0004
Quantity	10	Approval No.	A34_2005
		Type of stock	Catalogue items
Stock code	Product item	Batch number	Expiry date
▶ 1 - 1 - 3	Acetazolamide - tab - 250 mg	A344	10/2005
			No. of units
			10

Note that all available units of the selected stock code are boarded off.

The <Delete> and <Update> buttons of the top menu bar are enabled to modify the boarded off product item.

- Delete: Select the product item and click <Delete> to remove the product item from the list.
- Update: Select the product item and click <Update>, enter the changes and click <Save>.

6. Click the <Insert> button of the top menu bar of the top menu bar and go to step 5.
7. Click <Print...> to print the report as shown by Figure 9.15.

How to modify boarded off expired product items (or product items that will expire in the near future)?

8. Choose the menu option <Warehouse management> → Boarding off stock → Expired products → boarding off → modify> to list the boarding off dates:

	Warehouses	Boarding off date
▶	Central Store	01/04/2005

9. Select the boarding off date and click **Continue...** to open the Boarded off (expired) products data sheet (Fig. 9.14).
10. Select to product item (stock code), click <Update>, enter the changes and click the <Save> button of the top menu bar.
11. The <Delete> and <Insert> buttons of the top menu bar are enabled to modify the boarding off transaction:
- Delete: Select the product item and click <Delete> to remove the product item from the list.
 - Insert: click <Insert> and go to step 5.

How to add an expired product item (or product item that will expire in the near future) to an existing boarding off transaction?

SIGMED Lite allows the creation of only one (non-consolidated) boarding off transaction per day. In case of a second transaction the menu option <create> will modify the existing non-consolidated boarding off transaction. There are therefore two options available for adding a product item to a (non-consolidated) boarding off transaction.

12. Option *Modify*: see step 8.
Option *Create*: see step 3.

How to delete a product item from the boarded off (expired) product item list?

13. Choose the menu option <Warehouse management> → Boarding off stock → Expired products → boarding off → modify> to list the boarding off dates:

	Warehouses	Boarding off date
▶	Central Store	01/04/2005

14. Select the boarding off date and click <Continue...> to open the Boarded off (expired) products data sheet (Fig. 9.14).
15. Select to product item (stock code) and click the <Delete> button of the top menu bar.

9.3.2 Category: Other

With the exception of expired products (or product items to expire in the near future), all other boarding off transactions are registered through the sub-menu “Other”. The workflow is the same as described in the previous chapter. The reason for boarding off and the boarded off quantity of the product item are registered (Fig. 9.16).

Figure 9.16 Snapshot of boarding off data entry form (Other reasons).

Warehouse	Central Store	Boarding off date	01/04/2012
Product item	Acetazolamide - tab - 250 mg		
Stock code	1 - 1 - 2	Item code	A0004
Reason	Others	Quantity	10
		Approval No.	534
		Type of stock	Catalogue items

Stock code	Product item	Batch number	Expiry date	No. of Units
1 - 1 - 2	Acetazolamide tab 250 mg	L12231	08/2007	70
1 - 2 - 2	Chloramphenicol 250 mg - tab	00 12-1	09/2007	3000
1 - 1 - 1	Acetazolamide tab 250 mg	LK236	10/2008	980
1 - 2 - 1	Chloramphenicol 250 mg - tab	45-4-L1	12/2008	3000
1 - 4 - 1	Amoxicillin 250 mg - tab	0345	01/2010	9600

How to board off product items (category: other)?

This option is valid for boarding off transactions other than for expired products.

- Choose the menu option <Warehouse management → Boarding off stock → Other → boarding off → create> to open the boarding off product item data sheet (Fig 9.16).
- Click <Products...> to open the pop-up form “Product name”.

Product name
✕

Product name

Item Code

Type of stock ...

ATC code

Several search fields are available:

- type of stock
- Product item name
- Item code

Enter the search criteria and click <Continue...>. As a result all product items are shown in the table.

18. Select the stock code, fill in the fields:

- Treasury approval No
- Boarding off reason
- Quantity

Click the <Save> button of the top menu bar. The result is shown in the table:

Warehouse	Control Store	Boarding off date	01/04/2005
Product Item	Acetazolamide - tab - 250 mg		
Stock code	1 1 2	Item code	00001
Reason	Others	Quantity	10
		Approval No.	534
		Type of stock	Catalogue items
Stock code	Product item	Batch number	Expiry date
		No. of Units	
▶ 1-1-2	Acetazolamide - tab - 250 mg	112214	01/2007
			10

The <Delete> and <Update> buttons of the top menu bar are enabled to modify the boarded off product item.

- Delete: Select the product item and click <Delete> to remove the product item from the list.
- Update: Select the product item and click <Update>, enter the changes and click <Save>.

19. Click the <Insert> button of the top menu bar of the top menu bar and go to step 18.

20. Click <Print...> to print the report.

How to modify boarded off product items (category: other)?

This option is valid for boarding off transactions other than for expired products.

21. Choose the menu option <Warehouse management → Boarding off stock → Other → modify> to list the boarding off dates

Warehouses	Boarding off date
▶ Central Store	01/04/2005

22. Select the warehouse and boarding off date and click <Continue...> to open the boarded off products data sheet (Fig. 9.16).
23. Select to product item (stock code), click the <Update> button of the top menu bar, enter the changes and click <Save>.

The <Delete> and <Insert> buttons of the top menu bar are enabled to modify the boarding off transaction:

- Delete: Select the product item and click <Delete> to remove the product item from the list.
- Insert: click <Insert> and go to step 18.

How to add a product item (category: other) to an existing boarding off transaction?

SIGMED Lite allows the creation of only one (non-consolidated) boarding off transaction per day. In case of a second transaction the menu option <create> will modify the existing non-consolidated boarding off transaction. There are therefore two options available for adding a product item to a (non-consolidated) boarding off transaction.

24. See step 8

How to delete a product item from the boarded off (category: other) product item list?

25. Choose the menu option <Warehouse management> → Boarding off stock → Other → boarding off → modify> to list the boarding off dates:

	Warehouses	Boarding off date
▶	Central Store	01/04/2005

26. Select the boarding off date and click <Continue...> to open the Boarded off products data sheet (Fig. 9.16).
27. Select to product item (stock code) and click the <Delete> button of the top menu bar.

How to consolidate a boarding off transaction?

28. *Option I.* Expired products: choose the menu option <Warehouse management> → Boarding off stock> → Expired products → boarding off → consolidation> to list the boarding off dates.
29. *Option II.* Other reasons: choose the menu option <Warehouse management → <Boarding off stock> → Other → provisional consolidation> to list the boarding off dates.

30.

	Warehouses	Boarding off date
▶	Central Store	01/04/2005

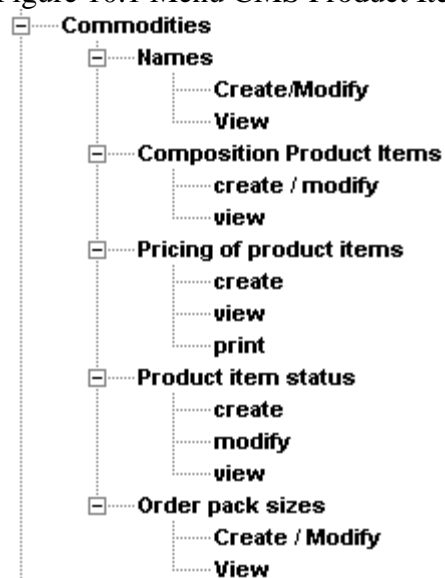
Select the boarding off date and click <Continue...> to open the Boarded off products data sheet (Fig. 9.14 & 9.16).

31. Click <Consolidate...> and confirm the choice.

10 Commodities

The menu “Commodities” allows the user to create and modify product items and to register the sales prices (Fig. 10.1). Moreover, the product item status and order pack sizes are defined through this menu option.

Figure 10.1 Menu CMS Product Items



10.1 Names

SIGMED Lite applies the following naming conventions for the commodities:

$$\text{Product Item} = \text{generic name (INN)} + \text{formulation} \quad (1)$$

For the **formulation** three options are available (see Chapter 5.1.2):

Option I: formulation = strength + dosage form + presentation

Option II: formulation = dosage form + strength + presentation

Option III: formulation = strength + presentation

Example I

product name: Acetazolamine
 dosage form: tablet (abbreviation: tab)
 strength: 250 mg (as sulphate)
 presentation: -

Formulation product item:

Option I	Acetazolamine - 250 mg - tab
Option II	Acetazolamine - tab - 250 mg
Option III	Acetazolamine - 250 mg

Example II

product name: Nevirapine
 dosage form: oral suspension (abbreviation: osu)
 strength: 50 mg / 5 ml
 presentation bottle 240 ml

Formulation product item:

Option I	Nevirapine - 50 mg / 5 ml - osu - bottle 240 ml
Option II	Nevirapine - osu - 50 mg / 5 ml - bottle 240 ml
Option III	Nevirapine - 50 mg / 5 ml - bottle 240 ml

A product item could constitute one or more order pack sizes.
 An order pack size is defined as:

$$\text{order pack size} = \text{presentation} + \# \text{ units} + \text{form} \quad (2)$$

e.g.	presentation:	<i>Example I</i>	<i>Example II</i>
	# units/presentation unit:	bottle of	pack of
	form:	60	24
		tabs	bottles

The full descriptions of these examples are:

Product item	Order pack size
abacavir (ABC) – tab - 300 mg (as sulphate)	Bottle of 60 tabs
nevirapine – osu – 50 mg / 5ml – bottle 240 ml	Pack of 24 bottles

All these building blocks for the commodity and order pack size description are stored in base tables. The Menu Option **Profiling– Tables – Products – Building blocks** provides access to these tables (Chapter 5.1.2).

SIGMED Lite allows you to classify the stock into types:

- Catalogue items
- Global Fund (ARV)
- Vertical Program (e.g. TB, STI)
- Donations (recapitalisation)

Within each type so-called product item classes can be defined. An example is given by Table 10.1.

Table 10.1 Type of stock & Product classes (source: CMS, Malawi).

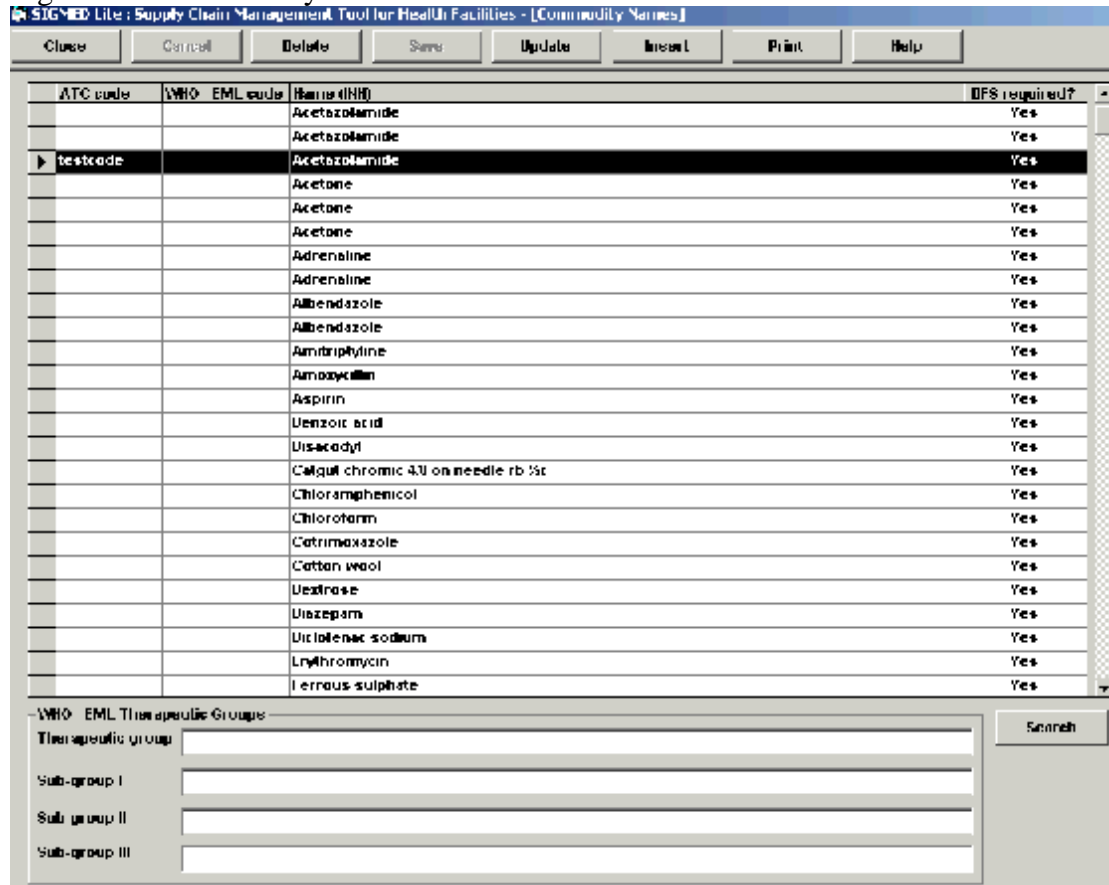
Catalogue items	
A. Tablets and Capsules B. Injectables C. Vaccines D. Raw materials E. Galenicals F. Surgical Dressings G. Sutures H. Surgical Equipment	I. Reading glasses K. Dispensary items L. Hospital equipment M. Laboratory Equipment and Materials N. X-ray films and equipment P. Dental items Q. Miscellaneous items
Vertical program	
SM. Safe Motherhood ST. Sexually Transmitted Infection drugs TB. Anti-TB drugs	CL. Child Lung Health Program CS. Family planning
FD. Donations	
GF. Global Funds	

SIGMED Lite generates a unique item number for each product. This item code is based on the product class: product class abbreviation + sequence number. It can be modified by the user.

Product items belonging to the types of stock “Global Fund” or “Donations” start with “GF” and “FD”, respectively.

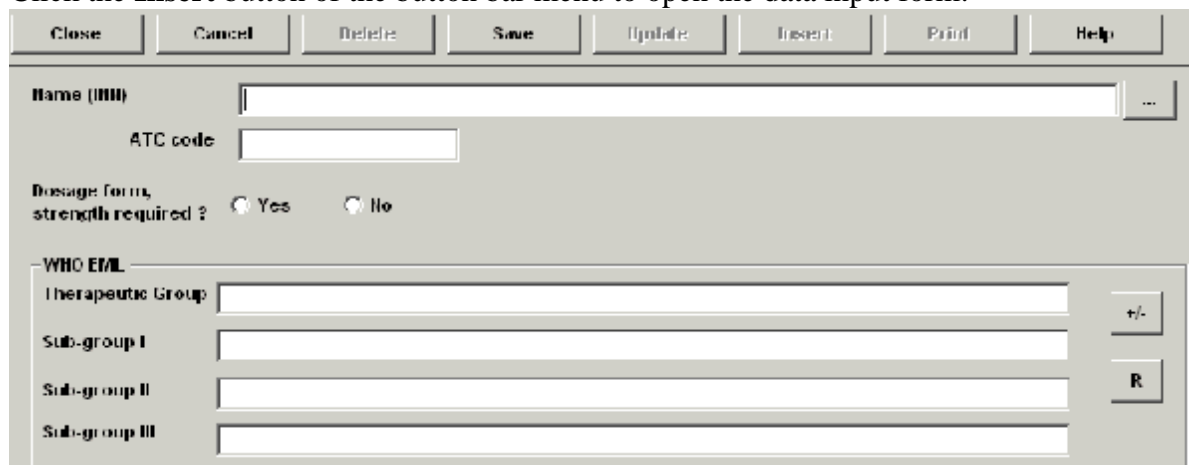
The function of the submenu **Names** is to attach specific characteristics, like the ATC code, to commodity names and to link these to the Therapeutic Groups. All entities must be defined already (see Menu Item <Profiling– Tables – Products – Building blocks>, Chapter 5.1). Figure 10.2 shows an example.

Figure 10.2 Commodity names



How to link a new product name to a Therapeutic Group?

1. Select the menu option <Commodities -> Names > Create/Modify> to display the Product Names data form (see Fig. 10.2).
2. Click the **Insert** button of the button bar menu to open the data input form:



3. Click **...** next to the field <Name (INN)> and select the commodity name from the list. If the name is not in the list, click **Cancel** and create it first (Menu Item Profiling -> Base tables -> Products -> Building Blocks -> generic name dosage form and strength - Name, see Chapter 5.1.2).

4. Enter the ATC¹ code (not mandatory).
5. If the commodity doesn't have a dosage form or strength, select **No**, else select **Yes** in the field **Dosage form, strength required?** (e.g. ELISA test kit = “No”).
6. If desired, select the Therapeutic (sub-)group from the data form which appears by clicking the button. Click on the **Continue** button to save the selection and to close the *Therapeutic Group* data form.

Code	Therapeutic Group
6.4.2.1	Nucleoside reverse transcriptase inhibitors
6.4.2.2	Non-nucleoside reverse transcriptase inhibitors
6.4.2.3	Protease inhibitors

7. Click on the **Save** button (button bar menu) to save to data or click **Cancel** to annul the data entry.

Note that a product can be given more than one ATC code if it is available in two or more strengths or formulations with clearly different therapeutic uses. In this case steps 2 – 7 must be repeated.

How to undo the link Commodity Name – Therapeutic Group?

8. Select the menu option <Commodities -> Names > Create/Modify> to display the Product Names data form (see Fig. 10.2)
9. Select the product name and click the **Update** button of the button bar menu to open the data input form.

¹ In the Anatomical Therapeutic Chemical (ATC) classification system, the drugs are divided into different groups according to the organ or system on which they act and their chemical, pharmacological and therapeutic properties. For more information visit <http://www.whocc.no/atcddd>

Name (VIII)

ATC code

Dosage form, strength required ? Yes No

WHO EML

Therapeutic Group


Sub-group I

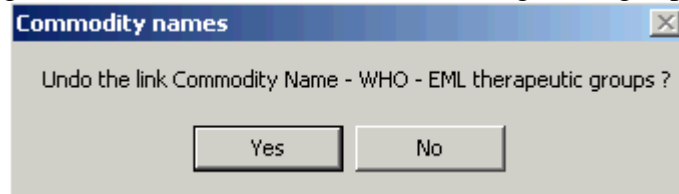
Sub-group II

Sub-group III

+/-

R

10. When clicking the  button (=Reset) the following message appears:



11. Select **Yes** to confirm and click the **Save** button of the button bar menu to close the update data form.

10.2 Composition product items

The function of the sub-menu **Composition product items** is to define the type of stock, product item characteristics, the formulation (dosage form, strength) and, if required, the presentation. Figure 10.3 presents the data entry form.

Figure 10.3 Product item composition: data form

Close Cancel Delete Save Update Insert Print Help

Name: Acetazolamide

Type of stock: Catalogue items ATC code: testcode

Product class: A. Tablets and Capsules Item code: A0004

ABC analysis? Yes No Batch No. required (Y/N)? Yes No

VENO Category: V E N Expiry date required (Y/N)? Yes No

Dosage, form and strength

Name, dosage form and strength: Acetazolamide tab 250 mg

Item code	ATC code	Product item
A0004	testcode	Acetazolamide - tab - 250 mg
B0012		Aminophylline - inj - 25 mg/ml - vial 10 ml
A0028		Aminophylline 100 mg/ml - tab
A0034		Amtriptyline 25 mg - tab
CL0248		Amoxycillin 125 mg/ml - ampoule 100 ml
P0240		Amoxycillin 125 mg/ml - bottle 100 ml
A0038		Amoxycillin 250 mg - tab
A0046		Aspirin 300 mg - tab
D0012		Benzoic acid - pack 500 g
A0068		Disarandyl 5 mg - tab

Search...

ABC analysis: Class A = default (See also Chapter xxxx)

VENO: V = Vital (=default)

E = Essential

N = Non – essential

The fields “Batch No. required (Y/N)?” and “Expiry date required (Y/N)?” are control parameters. When their value is set at ‘Yes’ then SIGMED Lite validates the entry of the batch number and expiry date during the registration of the receipt (see Chapter 7.2 – *Receipts of goods*).

How to create a product item?

The creation of product items is very important. False or incomplete information will lead to misleading information. Double data entry should be avoided. This will have great impact on the reliability of the management information.

Note that a product item description constitutes: product name + dosage/strength + presentation (See also chapter 5.1.2).

To **create** a product item (e.g : Aminophylline - inj - 25 mg/ml - vial 10 ml)

12. Select the menu option <Commodities -> Composition Product names -> create/modify> to display the Product Item data form (see Fig. 10.3).

13. Click the **Insert** button of the button bar menu and click next to the field <Name> to open the *Available Product Names* data form.

ATC code	Code	Name (INN)
tcac0dc		Acetazolamide
		Albendazole
		Aminophylline

- Select the name in the table and click to close the *Product Names* data form. If the name of the product is not listed click **Cancel** and create it first (see chapter 5.1.2)

14. Select the <Type of stock> and <Product Class>. Enter the item code and the other product item characteristics.

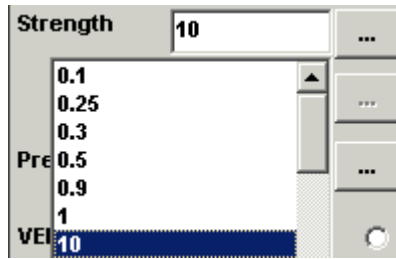
15. Click to open the formulation form


16. Click next to the field **Dosage form** and select the name from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.


Code	Form
inj	injectable
amp	ampoule
bot	bottle
cap	capsule
cre	cream
drp	drop
gra	granules
inh	inhalation (aerosol)
inj	injectable
kit	kit
lot	lotion
oi	ointment
ora	oral solution

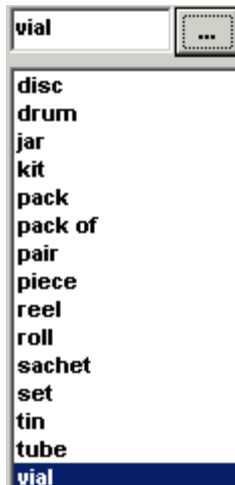
The strength of a product item is composed step-by step. E.g. a strength of 25 mg / ml is considered as 3 entries.


17. Click on the first button next to the field **Strength** and select the value (quantity) from the list. If the value is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected value to close the list.




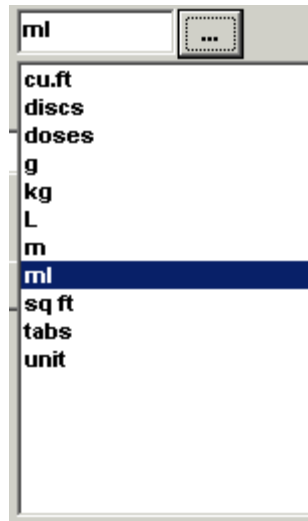
18. Click on the second  button next to the field **Strength** and select the name (unit) from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.

19. Click on the  button next to the field **Presentation** and select the name (form) from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.



20. Click on the second  button next to the field **Presentation** and select the name (Quantity) from the list. If the name is not in the list, click **Cancel** and create it first (See Chapter 5.1.2). Double-click the selected name to close the list.

21. Click on the third  button next to the field **Presentation** and select the name (Units) from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.



Note that in the field above the data table the result of this step-wise creation of the product item is displayed.

22. Click the <Close> button to return the product item data form (fig. 10.3).
23. Click the <Save>.
24. Refresh the statistics (see Chapter 5.2.5)

How to modify a product item?

25. Select the menu option <Commodities -> Composition Product names -> create/modify> to display the Product Item data form (see Fig. 10.3).
26. Select the product item and click the **Insert** button of the button bar menu
27. Go to step 14
28. Refresh the statistics (see Chapter 5.2.5)

How to delete a product item?

Product items can only be deleted if they are not used in transactions. If a product item is part of a List of requirements it cannot be removed for the system. In this case the status “Obsolete” of the product item could be set at “Yes”.

29. Select the menu option <Commodities -> Composition Product names -> create/modify> to display the Product Item data form (see Fig. 10.3).
30. Select the product item and click the **Delete** button of the button bar menu. In case of failure SIGMED will show a message.
31. Refresh the statistics (see Chapter 5.2.5)

10.3 Pricing

Sales prices of product items are registered in the **base** currency (Fig. 10.5). Figure 10.6 shows the data entry form.

Fig 10.5 Sales price data sheet

from	till	currency	VAT (%)	sales
01/05/2003		USD	0.0	0.0031500

Fig 10.6 Sales price data entry form

from	till	currency	VAT (%)	sales
01/05/2003		USD	0.0	0.0031500

Registration of Catalogue prices

Product item: Acetazolamide tab 250 mg
 Item Code: A0004
 Product class: A. Tablets and Capsules
 Start date: 01/04/2005
 End date:
 VAT %: 0
 Currency: USD
 Sales price: 0.00320

Cancel... Continue...

Printing constitutes two options. The first option is to print the actual price list. The second option is to print only the changes. Figure 10.7 shows the report options form.

Figure 10.7 Product item prices printing form

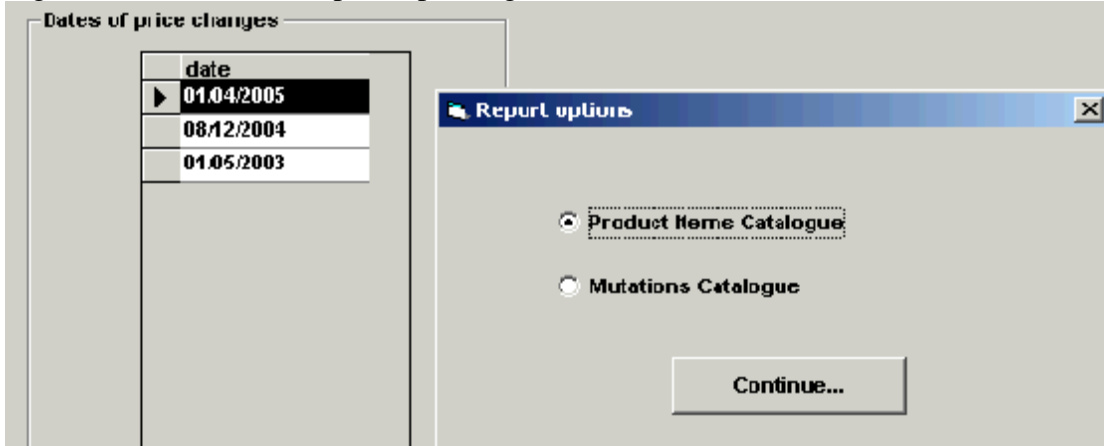


Figure 10.8 Price list

Pharmacy AMC Hospital **Catalogue Product Items**

Page 1 of 1
04/04/2005

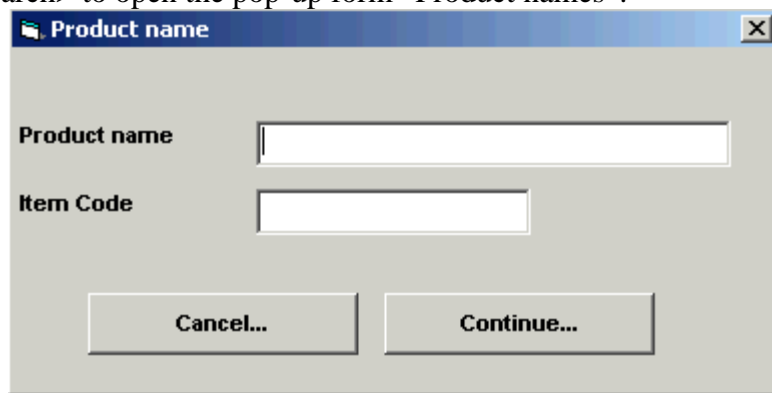
Item code	ATC Code	Product item	Sales price USU	Sales type
Catalogue items				
<i>A Tablets and Capsules</i>				
AMM4	tectoode	Acetazolamide - tab - 250 mg	0.0032000	U, 1

Sales Type: 0 = Sales Price + Handling Fee + Surtax ; 1 = Sales Price; 2 = Handling Fee + Surtax; 3 = free

The reports comprises a column “Sales type” which references to the pricing mechanism. In our example the report shows that the product item “Acetazolamide – tab – 250 mg” constitutes batches of sales type 0 as well as sales type 1 (see also Chapter 7.1.2).

How to price a product item?

- 32. Choose the menu option <Commodities → Pricing of product items → create> to list the product items.
- 33. Click <Search> to open the pop-up form “Product names”:



Several search fields are available:

- Product item name
- Item code

Enter the search criteria and click <Continue...>. As a result all product items are shown in the table.

34. Select the product item (table) and click <Continue...> to open the Sales price data sheet (Fig. 10.5).
35. Click the <Insert> button of the top menu bar to open to pop-up form “Registration of Catalogue prices” (Fig. 10.6).
36. Enter the new price and click the <Save> button of the top menu bar. The result is shown in the table.

	from	till	currency	VAT (%)	sales
	01.04/2005		USD	0.0	0.0032000
	01.05/2003	31.03/2005	USD	0.0	0.0034500

By default, SIGMED Lite takes the present date as start date. The end date should be left blank. SIGMED Lite automatically assigns the end date of the previous price. In the example of Fig. 10.5 the end date is set at “31/03/2005”.

37. The buttons <Delete> And <Update> of the top menu bar are enabled:
 - o Delete: select the price (table) and click <Delete> to remove it from the database.
 - o Update: select the price (table), enter the new value and click in <Save>.
38. Refresh the statistics (see Chapter 5.2.5)

How to modify a price?

39. Choose the menu option <Commodities → Pricing of product items → create> to list the product items.
40. Click <Search> to open the pop-up form “Product names”:

Several search fields are available:

- type of stock
- Product item name
- Item code

Enter the search criteria and click <Continue...>. As a result all product items are shown in the table.

41. Select the product item (table) and click <Continue...> to open the Sales price data sheet (Fig. 10.5).
42. Select the start date and click the <Update> button of the top menu bar to open to pop-up form “Registration of Catalogue prices” (Fig. 10.6).
43. Go to step 33.
44. Refresh the statistics (see Chapter 5.2.5)

How to delete a price?

Prices can be removed from the system, as long the price is not used (customer’s invoice). It is not possible to delete all the prices of a product item in SIGMED Lite. A product item should have at least one price.

45. Choose the menu option <Commodities → Pricing of product items → create> to list the product items.
46. Click <Search> to open the pop-up form “Product names”:

Several search fields are available:

- type of stock
- Product item name
- Item code

Enter the search criteria and click <Continue...>. As a result all product items are shown in the table.

47. Select the product item (table) and click <Continue...> to open the Sales price data sheet (Fig. 10.5).
48. Select the start date and click the <Delete> button of the top menu bar.
49. Refresh the statistics (see Chapter 5.2.5).

How to print the product price change?

50. Choose the menu option <Commodities → Pricing of product items → printing>.
51. If you want to print the mutations only select the date, click <print> to open the print option pop-up form and select the option “Mutations Catalogue”.
52. If you want to print the actual price list, click <print> to open the print option pop-up form and select the option “Product Items Catalogue”.

10.4 Product item status

The situation could occur that the quality of a product item suddenly deteriorates or that a supplier re-calls one of his products. In these cases the product item should be no longer available for sales purposes, which is done by a status changes.

The status change is made at product item batch level (stock code). Three status levels are distinguished:

1. approved
2. on hold
3. rejected

Only “approved” stock codes will appear on the (by SIGMED Lite generated) picking list. Figure 10.9 shows the product item status data sheet.

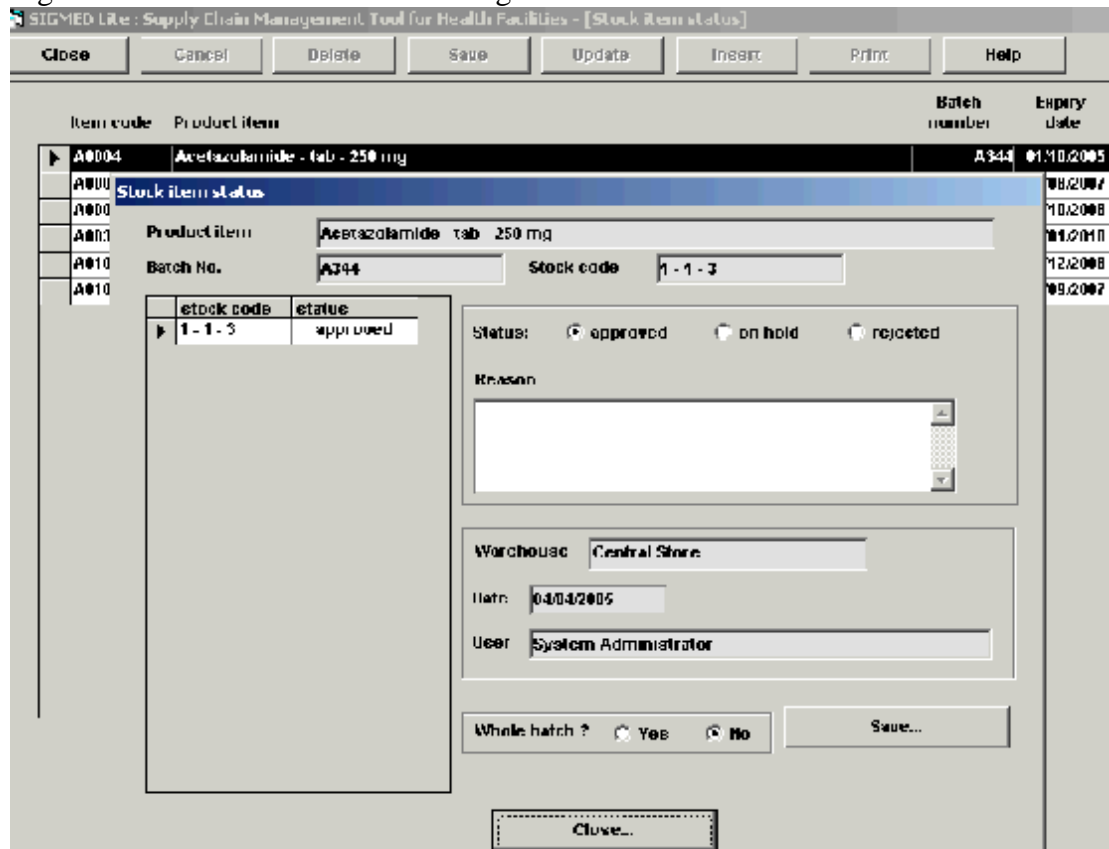
Figure 10.9 Product item status data sheet

Item code	Product item	Batch number	Expiry date
A0004	Acetazolamide - tab - 250 mg	A344	01/10/2005

Continu... Search... Status: approved on hold rejected all

The default status value is “approved”. Changes are made in the form presented by Figure 10.10.

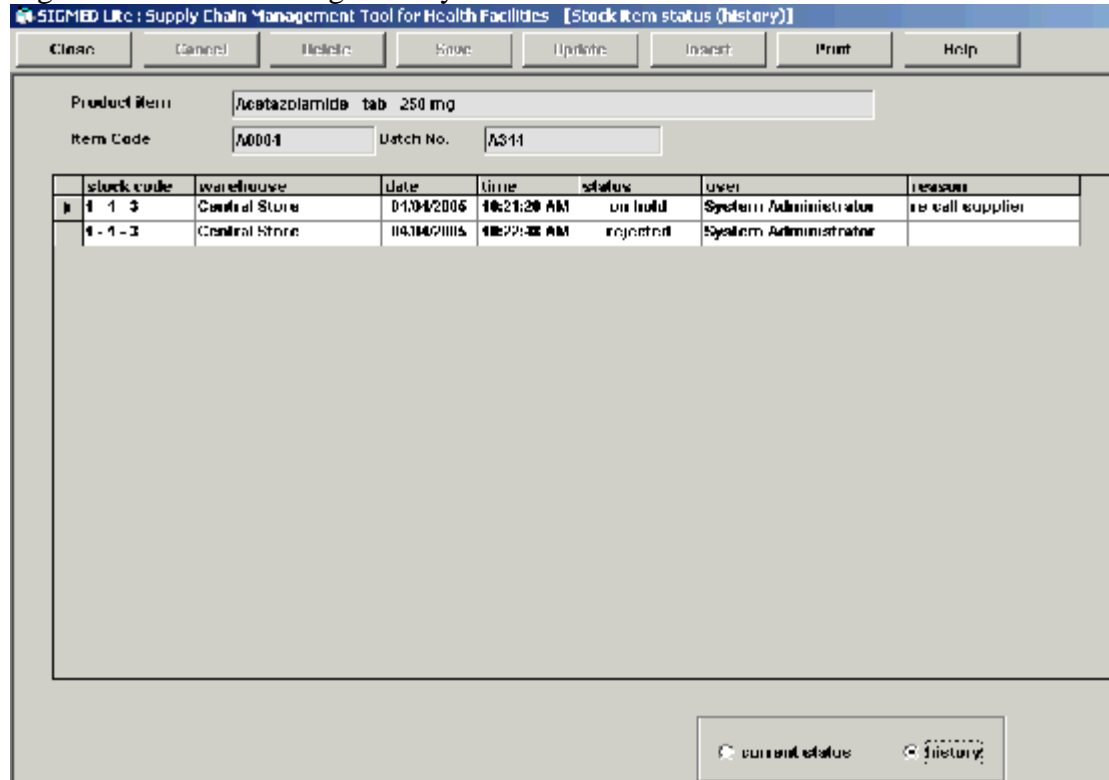
Figure 10.10 Product item status change form



The stock code and the status are shown in the table. The date of the status change and the name of the user are displayed.

The <view> option of the sub-menu <Product item status> shows the history of the product item status changes (Fig 10.11).

Figure 10.11 Status change history



How to change the status of a product item?

53. Choose the menu option <Commodities → Product item status → change > to list the product items in stock. Batch number and expiry date are also shown.

Item code	Product Item	Batch number	Expiry date
▶ A0004	Acetazolamide - tab - 250 mg	A344	01/10/2006
▶ A0004	Acetazolamide - tab - 250 mg	L1234	01/08/2007
▶ A0004	Acetazolamide - tab - 250 mg	LK235	01/10/2006
▶ A0030	Amoxicillin 250 mg - tab	K1435	01/01/2010
▶ A0102	Chloramphenicol 250 mg - tab	45-4-L1	01/12/2006
▶ A0102	Chloramphenicol 250 mg - tab	KL12-3	01/09/2007

54. Select the product item and click <Continue...> to open the product item status data form (Fig. 10.10).

Note that the fields “date” and “user” already have been filled in by SIGMED Lite. These fields cannot be changed. The available stock codes and the current status of the selected product item appear in the table. SIGMED Lite automatically selects the first available stock code.

55. Choose the new status (“approved”, ”on hold” or ”rejected”) and enter the reason for the change.
56. If the status change applies to the whole batch choose “Whole batch ? = Yes”. The default is “No”.
57. Click the <Save...> button.

58. Click the <Close...> button.
59. Refresh the statistics (see Chapter 5.2.5).

How to modify the status of a product item?

SIGMED Lite logs all status changes. The <modify> option is limited to updating only the reason for the status change. To change the status use the <create> option (see 10.4.2.1).

60. Choose the menu option <Commodities → Product item status → modify> to list the product items with status changes (Fig 10.10).
61. Select the product item and click <Continue...> to open the product item status data form (Fig. 10.11). This table shows the current status of the selected product item.
62. Select the batch and click the <Update> button of the top menu bar to open the pop-up form <Reason>:

stock code	warehouse	date	time	status	user	reason
1-1-1	Central Store	04/02/05	10:00:20 AM	rejected	System Administrator	

Stock Item status

Product item: Acetazolamide - tab - 250 mg

Batch No.: A344 Stock code: 1-1-1

Reason: supplier recall

Buttons: Close... Save...

63. Enter the field “Reason” and click the <Save> button.

How to delete a status change entry of a product item?

Removal of a status change entry is not possible. All changes are logged (see 10.4.2.4).

How to view a status change history of a product item?

64. Choose the menu option <Commodities → Product item status → view> to list the product items with status changes (Fig 10.9).

65. Select the product item and click <Continue...> to open the product item history status data form (Fig. 10.11). This table shows the current status of the selected product item.

Select the option <History> to list the status change history

10.5 Order pack sizes

Defining order pack size of product items is the main function of this menu. Figure 10.12 displays an example.

Figure 10.12 Order pack size data form


Supplier	Pack size	Order pack size	Pack price
Central Medical Stores	tin 100 tabs	100 tablet(s)	USD 3.1600



The order pack sizes of the product items (upper table) are displayed in the lower data table. Details of the selected item are shown in the fields.

How to create an order pack size


66. Choose the menu option <Commodities → order pack size → create/modify> to list the order pack size data form (Fig 10.12).
67. Select the product item (upper table) and click the **Insert** button of the button bar menu

The pack size of a product item is composed step-by step. E.g. a pack size “tin of 100 tabs” is considered as 3 entries.

68. Click on the first  button next to the field **Pack size** and select the name (presentation) from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.

69. Click on the second  button next to the field **Pack size** and select the value (quantity) from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2). Double-click the selected name to close the list.
70. Click on the third  button next to the field **Pack size** and select the name (unit) from the list. If the name is not in the list, click **Cancel** and create it first see Chapter 5.1.2). Double-click the selected name to close the list
71. Enter the No. of units per order pack.

Note that the value of this field must correspond with the quantity selected of the second field of the **Pack Size** (see step 70).

72. Select the currency and enter the supplier's price of the order pack.
73. Click on the  button next to the field **Supplier** and select the name from the list. If the name is not in the list, click **Cancel** and create it first (see Chapter 5.1.2).
74. Enter the supplier's item code in order to facilitate the tracking and tracing (see Chapter 12.8).
75. Click on the **Save** button of the button bar menu.

How to modify an order pack size of a product item:

Note that it is not possible to change an order pack size when the product item has been purchased. Pack price, supplier's item code and supplier can always be modified.

76. Choose the menu option <Commodities → order pack size → create/modify> to list the order pack size data form (Fig 10.12).
77. Select the product item (upper table) and the order pack size (lower table) and click the **Update** button of the button bar menu.
78. Go to step 69.

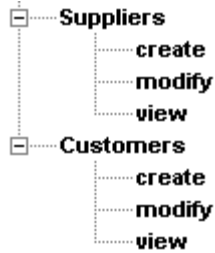
How to delete an order pack size of a product item:

79. Choose the menu option <Commodities → order pack size → create/modify> to list the order pack size data form (Fig 10.12).
80. Select the product item (upper table) and the order pack size (lower table) and click the **Delete** button of the button bar menu.

11 External Contacts

SIGMED distinguishes 2 types of external contacts: Suppliers and Customers.

Figure 11.1 Menu External Contacts.



11.1 Suppliers

The supplier data form is illustrated by Figure 11.2.

Figure 11.2 Supplier data form

How to create a supplier?

1. Choose the menu option <External Contacts → Suppliers → create> to open the supplier's data form (Fig 11.2)
2. Fill in the fields and click the <Save> button of the top menu bar.
3. The buttons <Update> and <Delete> of the top menu bar are enabled:
 - Update: Click <Update>, enter the new values and click <Save>.
 - Delete: Click <Delete> to remove the supplier from the system.

How to modify a supplier?

4. Choose the menu option <External Contacts → Suppliers → modify> to list the suppliers:

	name	city	country
▶	Central Medical Store	Lilongwe	MALAWI
	Intermed	LILONGWE	MALAWI
	MissionPharma International	LYNGE	DENMARK

5. Select the supplier and click <Continue ...> to open the supplier data sheet (Fig. 11.2).
6. Click the <Update> button of the top menu bar, enter the new values and click <Save>.
The button <Delete> of the top menu bar is enabled. Click it to remove the supplier from the system.

How to delete a supplier?

7. Choose the menu option <External Contacts → Suppliers → modify> to list the suppliers:

	name	city	country
▶	Central Medical Store	Lilongwe	MALAWI
	Intermed	LILONGWE	MALAWI
	MissionPharma International	LYNGE	DENMARK

8. Select the supplier and click <Continue ...> to open the supplier data sheet (Fig. 11.2).
9. Click the <Delete> button of the top menu bar

11.2 Customers

The customer data form is presented by Figure 11.3

Figure 11.3 Customer data form

The screenshot shows a software window titled "SIGMED Lite: Supply Chain Management Tool for Health Facilities - [Customer data sheet]". The window has a menu bar with buttons for Close, Cancel, Delete, Save, Update, Insert, Print, and Help. Below the menu bar, the form is organized into several sections:

- Institution:** A text input field.
- Name:** A text input field.
- Customer number:** A text input field.
- Type of customer:** A dropdown menu with a "..." button.
- Address:** A text input field.
- City code:** A text input field.
- City:** A text input field with a "..." button.
- Country:** A text input field.
- Region:** A dropdown menu with a "..." button.
- District:** A dropdown menu with a "..." button.
- Telephone:** A text input field.
- Fax:** A text input field.
- Telex:** A text input field.
- e-mail:** A text input field.
- Status:** Radio buttons for "Yes" and "No".
- Sector:** Radio buttons for "Public" and "Private".
- Menu:** A large empty rectangular area.

How to create a customer?

10. Choose the menu option <External Contacts → Customers → create> to open the customer data form (Fig 11.3)
11. Fill in the fields and click the <Save> button of the top menu bar.
12. The buttons <Update> and <Delete> of the top menu bar are enabled:
 - Update: Click <Update>, enter the new values and click <Save>.
 - Delete: Click <Delete> to remove the customer from the system.

How to modify a customer?

13. Choose the menu option <External Contacts → customer → modify> to list the customers
14. Select the customer and click <Continue ...> to open the supplier data sheet (Fig. 11.3).
15. Click the <Update> button of the top menu bar, enter the new values and click <Save>. The button <Delete> of the top menu bar is enabled. Click it to remove the customer from the system.

How to delete a customer?

16. Choose the menu option <External Contacts → Customer → modify> to list the customers

17. Select the customer and click <Continue ...> to open the customer data sheet (Fig. 11.3).

18. Click the <Delete> button of the top menu bar

12 Management Information

In several ways the Management Information module of SIGMED Lite is an important tool in making the business operations transparent and efficient (Fig. 11.1). In the first place, it provides aggregated information of all business transactions (e.g. sales, receipts, transfers). Secondly, statistics are provided (e.g. supplier prices, products to expires, stock). Thirdly, it guides staff members in their decisions (e.g. stock order levels). Lastly, it allows the user to react fast and adequate on unforeseen situations (e.g. tracking and tracing – recall of products).

Figure 12.1 Management Information Module



In most cases data is presented in two ways: aggregated by financial year or by period defined by the user. This enables the user to create weekly, monthly, quarterly and annual reports. The data presented by the screenshots of this chapter do not reflect the real situation.

12.1 Procurement

Management Information about the Procurement process constitutes statistics on procurement status, suppliers and stock levels. An important tool is the Quantification sub module, which assists the user in determining stock re-order levels (Fig. 12.2).

Figure 12.2 Management Information Module: Procurement



12.1.1 Quantification

A) Average Monthly Consumption (AMC) and Re-Order levels

Reliable determination of re-order levels is one of the challenges in managing drug and medical supplies. SIGMED Lite serves as a tool in the process of quantification; it is not a decision-maker.

SIGMED Lite provides statistics on the average monthly consumption (AMC). In SIGMED Lite the consumption is based on sales data (=quantity issued) (see Chapter 8).

Due to significant fluctuations in consumption, the AMC is based on past 3, 6 and 12 month's sales data. Moreover, slower moving items will need to use more demand history to get an accurate model of the demand.

The calculation of the AMC is illustrated by an example (see Table 12.1 for base data).

Table 12.1 Base data for AMC

	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04
Sales (quantity issued)	0	20	0	100	100	0
Stock	20	20	0	200	100	0
out-of-stock (days)	10	20	30	0	5	31

SIGMED Lite applies the following rule:

*The AMC is calculated as: Number of Units divided by the Number of Months
If there is no demand for a product during one month, this month will not be considered in the calculation of the AMC if the number of out-of-stock days is equal or more than 15 days.*

Each day SIGMED Lite checks whether a product is in stock or not. At the end of the month SIGMED Lite calculates the total number of out-of-stock days for each product item.

Applying those rules will give the following results for the AMC (6 months):

Table 12.2 AMC (6 months) based on Quantity Issued (Sales)

	demand	month	
Jul-04	0	1	(no demand ; out-of-stock <15 days)
Aug-04	20	1	
Sep-04	0	0	(no demand ; out-of-stock >=15 days)
Oct-04	100	1	
Nov-04	100	1	
Dec-04	0	0	(no demand ; out-of-stock <15 days)
Total	220	4	
AMC	220/4=55		

The AMC is estimated at 55 Units.

The Stock Level (expressed in months) is calculated as:

$$SL = AMC / \text{Stock on hand}$$

The quantity to procure or Re-Order Level (expressed in Units) is calculated as:

$$\text{Re-Order Level (Units)} = AMC * (LT + SOL) - (\text{Stock on hand} + \text{Stock on Order})$$

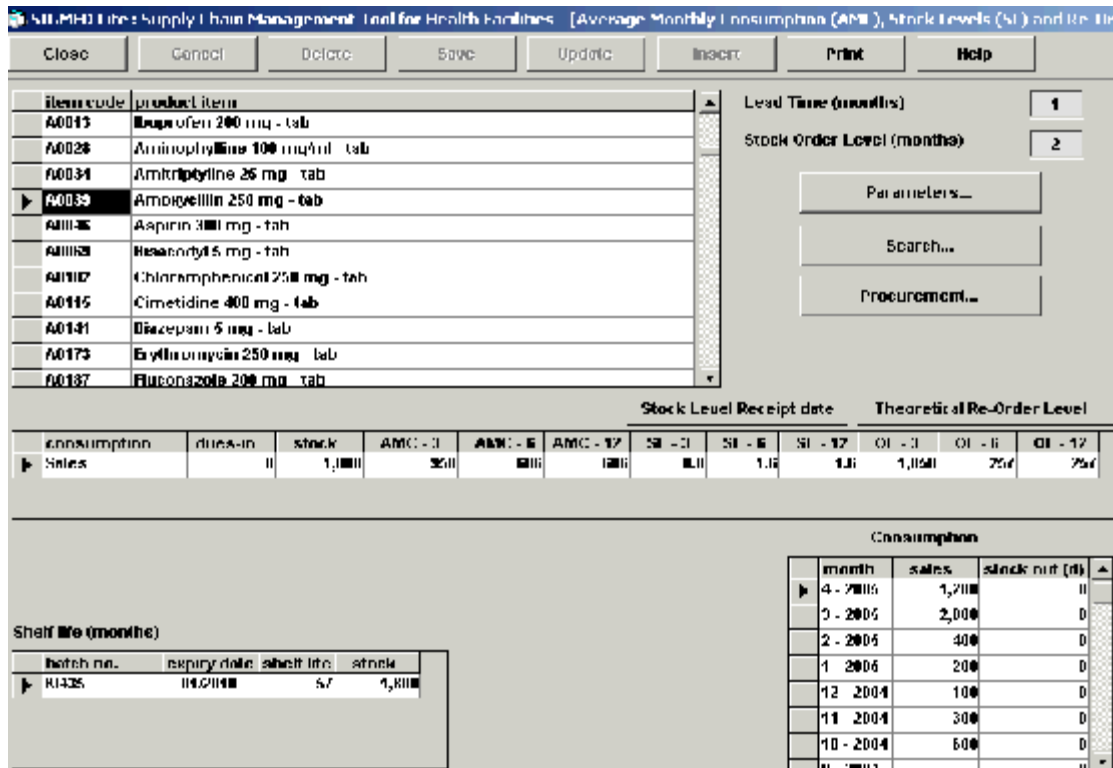
LT = Lead Time (in months)

SOL = Stock Order Level (in months)

Default values for Lead Time² and Stock Order Level are 1 and 3 months, respectively. The Stock Order Level includes the Safety Stock Level. The safety stock is the physical stock of an item, which is minimally to be present. It provides protection against running out of stock during the time it takes to replenish inventory. Safety stock is necessary to ensure good customer service.

An example of the quantification statistics form is shown by Figure 12.3

Figure 12.3 Average Monthly Consumption (AMC), Stock Levels (SL) and Re-Order Levels



² Lead time is the amount of time from the point at which you determine the need to order to the point at which the inventory is on hand and available for use. It should include supplier or manufacturing lead time, time to initiate the purchase order or work order including approval steps, time to notify the supplier, and the time to process through receiving and any inspection operations. In SIGMED Lite it comprises the period: start date lead time – date consolidation receipt.

Each product item comprises a Lead Time and Stock Order Level. Changing these parameters (through the button <Parameters...>) results in a re-calculation of theoretical re-order levels.

The form shows the stock on order, stock on hand, the AMC for 3, 6 and 12 months, stock levels and Theoretical Re-Order Levels.

Stock Levels (SL) are expressed in months, theoretical Re-Order Levels (ROL) in Units. The SL and ROL are based on the AMC of 3, 6 and 12 months. The stock level (SL) is expressed in months and is calculated as:

$$SL = \text{stock on hand at the expected receipt date} / \text{AMC}$$

Detailed information about procurement status, shelf life, consumption and stock out is available as well.

Clicking the button <Procurement...> displays a new form showing all product items with a theoretical re-order level greater than zero. Figure 12.4 shows an example.

Figure 12.4 Re-order Level data form

SIGMED V3.32 [Re Order Level (Units)]

Close Cancel Refresh Help Save Update Insert

Item code	Product Name	ROL (Units)
A0022	Nicotinamide 50 mg in 100 tabs	
A0028	Allopurinol 100 mg in 100 tabs	500
A0067	Benzhexol 5 mg in 100 tabs	255
A0133	Culture swabs, sterile pack of 100	50
P0194	Gutta Percha points PD 15-20 act	10
P0232	Turbine hp, integrated F.Omach-lite (HSK) pack	
Q0001	CMS Drugs and Medical Supplies Catalogue pack	
SI 0017	Lact Count cleaning solution bottle 5 l	40

Lead Time (months)

Stock Order Level (months)

Parameters... Search... Print...

	consumption	ordered	stock	AMC - 3	AMC - 6	AMC - 12	SL - 3	SL - 6	SL - 12	OL - 3	OL - 6	OL - 12
Sales		400	265	60	36	20	0.0	0.4	6.3	475	19	0
Demand		400	265	60	36	20	0.0	0.4	6.3	475	19	0

Procurement Status

invitation	evaluation	close in	ordered
50%	0	400	1,000

Shelf life (months)

batch no.	expiry date	shelf life	stock
ET02038	03/2005	22	175
L102039	03/2005	22	50

In this form it is possible to enter the quantity to procure based on the information displayed in the lower tables and previous screen. The theoretical re-order level is recalculated when changing the values for Lead Time and/or Stock Order Level.

Figure 12.5 Re-order Level input form.

Theoretical Re-Order Level (Units)		
	Sales	Demand
OL - 3	475	475
OL - 6	19	19
OL - 12	0	0

The re-order input form is shown by Figure 12.5. In the procurement process, the information of the products to re-order is available for the user. Through selection the user can add the product item, including the quantity to procure to the List of Requirements (see 6.1).

How to determine the Theoretical Re-Order Level of a product item?

1. Choose the menu option <Management Information> → <Procurement> → <Quantification> → Average Monthly Consumption and Re-Order Levels>.
2. Select the product item (table upper left-hand side) (Fig. 12.3) or press <Search...> and enter the search criteria.
3. The parameters Lead Time and Stock Order Level of the selected product item can be changed by clicking the <Parameters...> button. Fill in the new values and click <OK...>. Subsequently, the theoretical re-order level will be re-calculated.
4. A report (“what you see is what you get”) is printed by clicking <Print...>.

How to enter the Re-Order Level of a product item?

5. Choose the menu option <Management Information> → <Procurement> → <Quantification> → Average Monthly Consumption and Re-Order Levels.
6. Click the <Procurement...> button to display the re-order level data form (Fig. 12.4). Note that theoretical re-order levels are re-calculated by changing the values for Lead Time and Stock Order Level.
7. Select the product item and click <Update> to open the Re-order Level input form (Fig. 12.5). Enter the units to order and click <Continue...>
8. Repeat step 7 through 8

9. A report (“what you see is what you get”) is printed by clicking <Print...>.

B) Stock levels

SIGMED lists for all product items the stock level (expressed in Months) based on (by the user defined) minimum and maximum levels (Fig. 12.6). The default value is 0 and 6 months. The Maximum Stock Level could also be used in the sense of **Reorder point**, being the inventory level, which initiates an order (*Reorder Point = Lead Time Demand + Safety Stock*).

Figure 12.6 Average Monthly Consumption (AMC) and Stock Levels (SL)

SIGMED V5.32 - [Average Monthly Consumption (AMC) and Stock Levels (SL)]

Close Cancel Refresh Delete Save Update Insert

from code	product item	Minimum Stock Level (months)
A0022	Nicotinamide 50 mg tln 1000 tabs	11
A0025	Allopurinol 100 mg tln 100 tabs	6
A0043	Culture swabs, sterile pack of 100	
PA194	Gutha Percha points PII 15-III set	
C0004	CMS Drugs and Medical Supplies Catalogue pack	
GF007	Face Count cleaning solution bottle 5 L	

Parameters...
Search...
Print...

	consumption	ordered	stock	AMC 3	AMC 6	AMC 12	SL 3	SL 6	SL 12
Sales		100	265	60	36	20	1.1	7.1	13.3
Demand		100	265	60	36	20	1.1	7.1	13.3

Procurement Status

invitation	evaluation	due in	ordered
600	0	100	1,000

Shelf life (months)

batch no.	expiry date	shelf life	stock
ET0203#	03.2005	22	175
ET02030	03.2005	22	30

Demand and Consumption

month	demand	stock out (d)	month	sales	stock out (d)
10-2003		0	10-2003		0
9-2003		0	9-2003		0
8-2003	180	0	8-2003	180	0
7-2003		20	7-2003		20
6-2003		0	6-2003		0
5-2003		0	5-2003		0
4-2003		0	4-2003		0
3-2003		0	3-2003		0

Consult the previous chapter for the calculation rules and explication.

How to list the stock level of product items?

- Choose the menu option <Management Information> → <Procurement> → <Quantification> → stock levels>. All product items are listed, which stock level is between 0 and 6 months (default).
- Select the product item (table upper left-hand side) (Fig. 12.6) or press <Search...> and enter the search criteria.
- The parameters Minimum and Maximum Stock Level can be changed by clicking the <Parameters...> button. Enter the new values and click <OK...>. Subsequently, the listing will be refreshed.
- A report (“what you see is what you get”) is printed by clicking <Print...>.

C) Stock-outs

Detailed information about stock-outs is provided by this sub-module. Figure 12.7 presents an example of the form.

Figure 12.7 Out-of-stock periods (days)

The screenshot shows the SIGMED V3.32 interface for 'Out-of-stock periods (days)'. It features a menu bar with 'Close', 'Cancel', 'Refresh', 'Delete', 'Save', 'Update', and 'Insert'. Below is a table of product items with 'Aspirin - 300 mg - tin 1000 tabs' selected. A detailed view for this item shows a table of stock-out days by month for the year 2003.

Item code	Product item
A0004	Acetazolamide - 250 mg - tin 100 tabs
A0008	Diclofenac sodium - 25 mg - tin 100 tabs
A0022	Nicotinamide 50 mg tin 1000 tabs
A0078	Aminophylline - 100 mg/ml - tin 1000 tabs
A0034	Amitriptyline - 25 mg - tin 100 tabs
A0039	Amoxycillin - 250 mg - tin 1000 tabs
A0045	Aspirin - 300 mg - tin 1000 tabs
A0069	Eisacodyl - 5 mg - tin 1000 tabs
A0098	Calcium gluconate - 600 mg - tin 1000 tabs
A0090	Carbamazepine 200 mg tin 1000 tabs
A0091	Carbimazole - 5 mg - tin 100 tabs
A0110	Chlorpromazine - 25 mg - tin 100 tabs
A0111	Chlorpromazine 100 mg tin 1000 tabs
A0115	Cimetidine - 400 mg - tin 100 tabs

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	total
2003							20	25	7	19			79

Per month the number of stock-out days is presented for each product item. The buttons <Search...>, <Year...> and <Out of Stock...> enables the user to re-define the search.

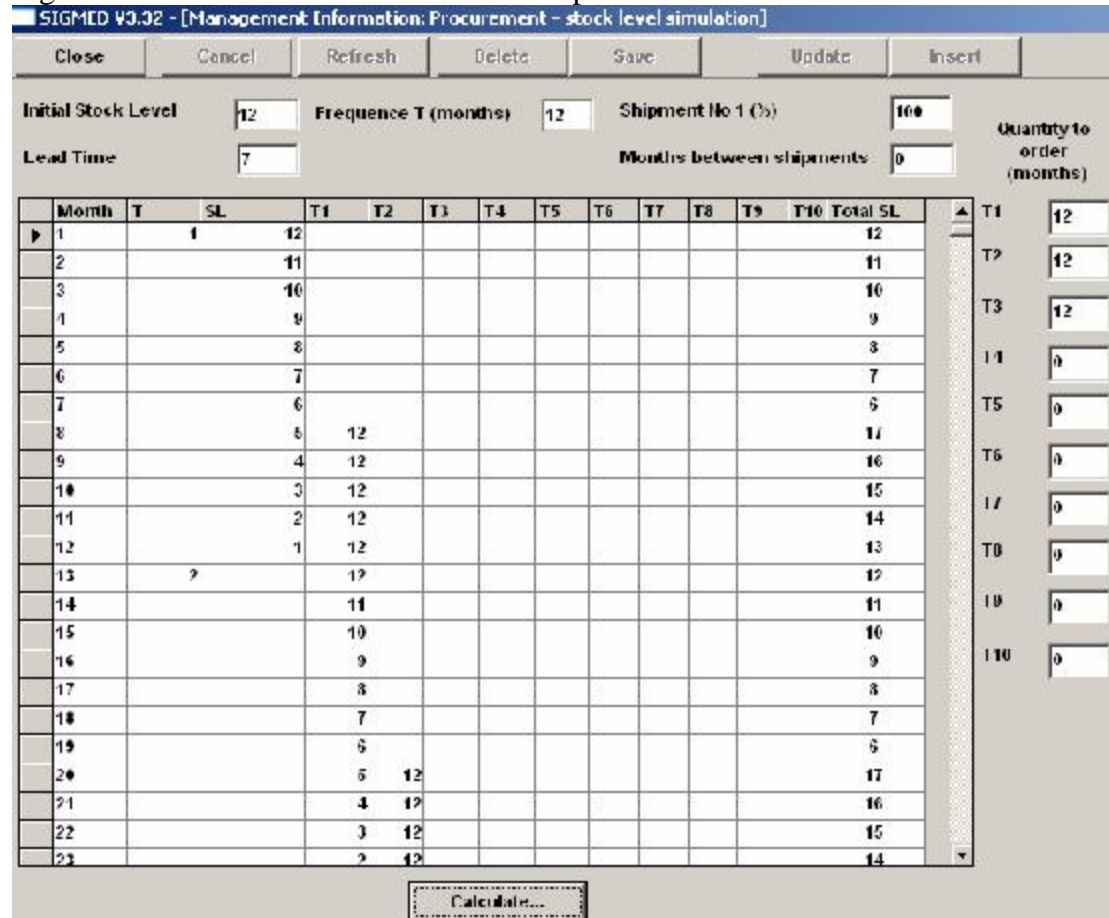
How to list the stock-out level of product items?

14. Choose the menu option <Management Information> → <Procurement> → <Quantification> → out-of-stock periods>. All product items are listed and their number of days stock-out for the current year.
15. Select the product item (table upper left-hand side) (Fig. 12.7) or press <Search...> and enter the search criteria.
16. To list another year, click <Year>, enter the new value and click the <Continue...> button. Subsequently, the listing will be refreshed.
17. To list only those product items with a minimum number of stock-out days for a given year press <Out of stock>, enter the new value and click <Continue...>. Subsequently, the listing will be refreshed.
18. A report (“what you see is what you get”) is printed by clicking <Print...>.

D) Order Level simulation

SIGMED Lite comprises a simulation module, in which the effects of fluctuations in lead time, stock order level, initial stock level, number of orders per year, partial shipments, etc. on stock level are visualised (Fig. 12.8).

Figure 12.8 Stock level simulation - one shipment



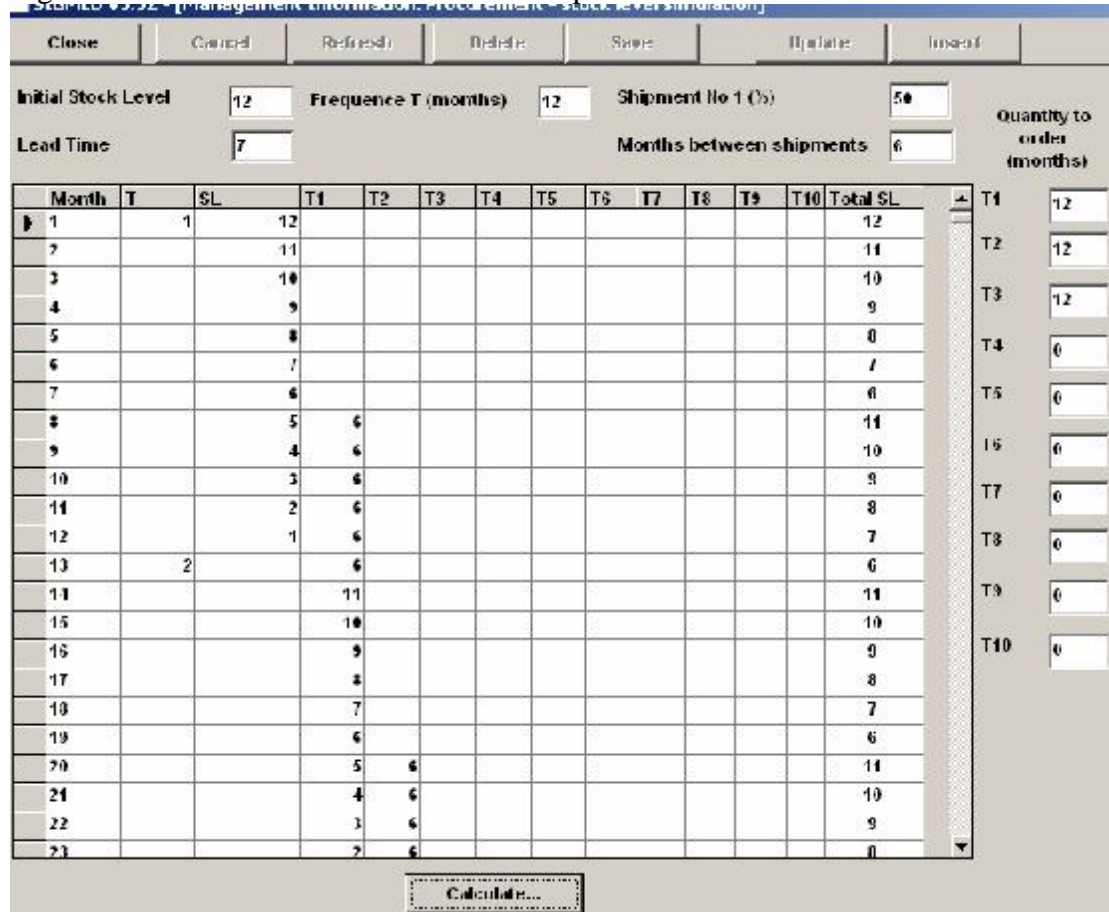
In the example the initial Stock level amounts 12 month. The Lead Time is 7 months. Every 12 months a tender is launched (= order or replenishment cycle). There is only one shipment. The Order level for the Tenders T1, T2 and T3 is 12 months of stock. All these parameters can be changes by the user.

The first column (left hand-side) shows the months. In the first month there is still 12 months stock (=initial stock level- 3rd column); the initial stock is “consumed” in month 13 (3rd column - SL). At month 8 the shipment of tender T1 arrives (4th column: T1). The total stock level is then 17 months. The “consumption” of the stock of tender T1 starts at month 13 and ends in month 24. The shelf-life of the products of this tender is 17 months.

In month 20 the second tender (T2) arrives. The total stock level amounts to 17 months.

The next figure shows the results if the tenders are split into two shipments. The second shipment arrives 6 months after the first one.

Figure 12.9 Stock level simulation - two shipments



The simulation shows that by splitting shipments the total quantity to stock decreases from 17 to 11 months. The shelf-life of the product of tender T1 is 12 months.

How to determine the effect of LT, OL, shipments, etc, on Stock Levels?

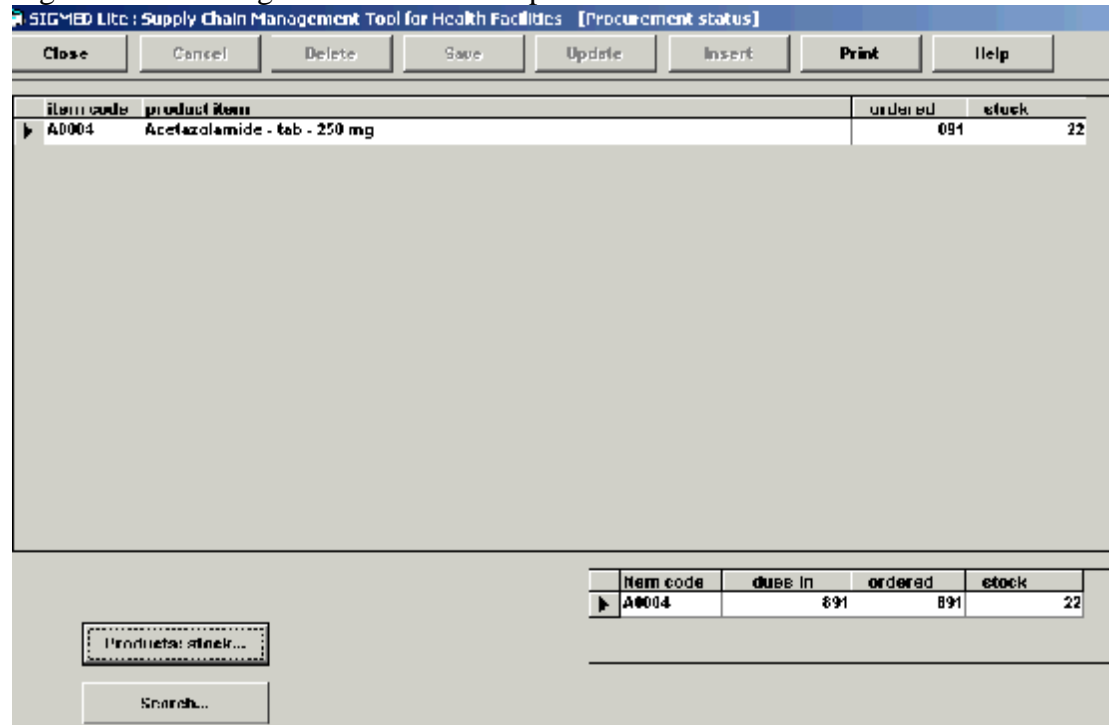
19. Choose the menu option <Management Information> → <Procurement> → <Quantification> → order level simulation>.

20. Fill in the values and press <Calculate...> to show the results.

12.1.2 Status

The sub-module “Status” provides all necessary information about procurement status as is shown by Figure 12.10.

Figure 12.10 Management Information: procurement status



The button <Stock...> shows the current stock position (see also chapter 9.2).

How to list the procurement status of a product item?

21. Choose the menu option <Management Information> → <Procurement> → <Quantification> → <Status>. The stock and the total number of units ordered are listed.
22. Select the product item (upper table) (Fig. 12.10) or press <Search> and enter the search criteria. The status of the selected product item is presented by the lower table.
23. To display the current stock, warehouses and stock codes click <Stock...>
24. A report (“what you see is what you get”) is printed by clicking <Print...>.

12.1.3 Suppliers

There are two ways in SIGMED Lite to provide management information about suppliers. In the first case SIGMED Lite provides statistics of all delivered products of a selected supplier. In the second case, a listing is generated of all suppliers of a selected product item. Examples of both ways are presented by the next figures.

Figure 12.11. Supplier's product items, purchase prices and Units delivered.

The screenshot shows the SIGMED V3.32 interface for 'Supplier: product items'. The 'Supplier' field is set to 'Intermed'. The upper table lists product items with columns for 'item code' and 'Product item'. The lower table shows details for the selected item 'Intermed', including 'period (m/y)', 'Currency', 'purchase price', and 'Units'. A summary row at the bottom shows 'Intermed Aminophylline 100 mg/ml tin 1000 tabs' with a 'Total' of 150 units.

item code	Product item
A0028	Aminophylline 100 mg/ml tin 1000 tabs
A0039	Amoxicillin 250 mg tin 1000 tabs
B0006	Adrenaline 1/100 ampoule 1 ml
B0040	Chlorpromazine hydrochloride 25 mg/ml ampoule 2 ml
B0110	Insulin soluble 100 IU/ml vial
D0110	Insulin zinc suspension (lente) 100 IU/ml vial 10 ml
B0222	Benzylpenicillin PFR 3 g / 5 MU vial

Supplier	period (m/y)	Currency	purchase price	Units
Intermed	07/2003	USD	1.0000	150

Intermed Aminophylline 100 mg/ml tin 1000 tabs	Total	150
--	-------	-----

The upper table shows the all the delivered product items of the selected supplier. The lower table shows the details of the selected product item: period (month/year), purchase price and No. of Units delivered.

How to list delivered product items and their purchase price of a supplier?

25. Choose the menu option <Management Information> → <Procurement> → <Suppliers> → product>. The product items of the selected supplier are listed in the upper table (Fig. 12.11).
26. Click the button next to the field “Supplier” to list the suppliers. Select a supplier and click <Continue...>. The upper table will be refreshed. Select a product item or click <Search...> and enter the selection criteria. The purchase price(s), delivery month(s) and No. of Units of the selected product item are presented in the lower table.
27. A report (“what you see is what you get”) is printed by clicking <Print...>.

When the user wants to know all the suppliers of the last year the option <Purchase prices> should be selected.
 After having entered the period (Fig. 12.12) SIGMED lists the product items and their respective supplier and purchase prices for the defined period (Fig. 12.13).

Figure 12.12 User defined period form

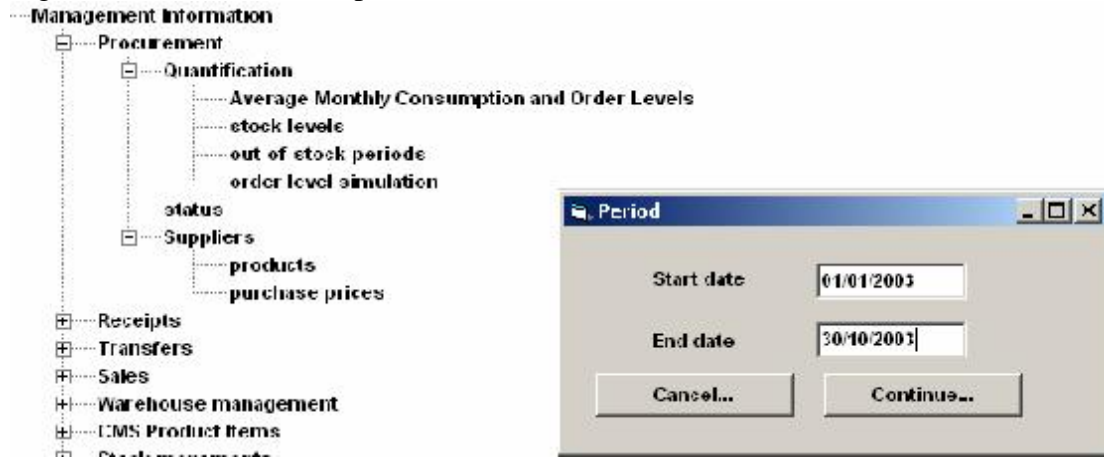


Figure 12.13 Suppliers, purchase and cost prices

SIGMED V5.32 - [Product Items: Supplier & Cost Price]

Close Cancel Refresh Delete Save Update Insert

Period: from 01/01/2003 till 31/10/2003 Supplier All

item code	Product item
A0115	Cimetidine 400 mg tin 100 tabs
A0116	Ciprofloxacin 250 mg tin 100 tabs
A0119	Codeine phosphate 15 mg tin 100 tabs
A0121	Hydrochlorothiazide 25 mg/ml tin 100 tabs
A0136	Dexamethasone 0.5 mg tin 100 tabs
A0138	Digoxin 250 mcg tin 100 tabs
A0173	Erythromycin 250 mg tin 1000 tabs
A0185	Ferrous sulphate 200mg / folic acid 250 micrograms tin 1000 tabs
A0187	Fluconazole 200 mg tin 100 tabs
A0188	Furosemide 40 mg/ml tin 1000 tabs
A0194	Griseofulvin 125 mg tin 100 tabs

Supplier	period (m/y)	Currency	purchase price	Cost Price	
				estimated	real
Dummy(Center)	06/2003	USD	1.0000	1.20	1.60
Dummy(North)	06/2003	USD	1.0000	1.20	1.60
Dummy(South)	06/2003	USD	1.0000	1.20	1.60

Digoxin 250 mcg tin 100 tabs Average

1.0000	1.20	1.60
--------	------	------

Print... Search...

The average purchase prices, estimated and real cost price for the defined period are also shown (see also chapter 7.3).

How to list all suppliers, purchase and cost prices of a product item?

28. Choose the menu option <Management Information> → <Procurement> → <Suppliers> → purchase prices>. The product items of all suppliers are listed in the upper table (= default) (Fig. 12.13). In the lower table all suppliers are listed of the selected product item.
29. Click the button next to the field “Supplier” to list the suppliers. After selecting a supplier the upper table (and lower table) will be refreshed. Select a product item or click <Search...> and enter the selection criteria. The average purchase prices and cost price of the selected product item for the defined period are presented in the lower table.
30. A report (“what you see is what you get”) is printed by clicking <Print...>.

12.2 Receipts

Management information about receipts is based on a user defined period or a financial year (FY). It constitutes the receipts (invoices – products) and the discrepancies (Fig. 12.14).

Figure 12.14 Management Information Module: Receipts



Figure 12.15 show an example of the invoice data form.

Figure 12.15 Management Information Module: Receipts – invoice information

supplier	value (USD)
Adcock Ingram	11.50
All	1,743,091.00
Dummy(Center)	1,731,949.83
Dummy(North)	1,820,454.77
Dummy(South)	41,699,639.31
H.C. R	82,300.00
Intermed	240,208.30
Pharmavet	1,495.00
Premiumway International	37,600.00
SADM Pharmaceuticals	550,912.21
Total	53,967,313.52

rv	procurement	invoice number	date	value (USD)
R/10/03 01/23	CMS TD 031/2002/02/01	12	19/08/2003	11.50

Adcock Ingram Total 11.50

For a defined period (or FY) the value of all receipts are listed (upper table). In the lower table the Receipt Voucher, the description of the procurement, invoice number, date and value of the selected supplier are presented.

Product item information is also available for the defined period (Fig. 12.16).

Figure 12.16 Management Information Module: Receipts – product item information

SIGMED V3.32 [Management Information: Procurement - Receipts]

Close Cancel Refresh Delete Save Update Insert

Period: from 01/01/2003 till 31/10/2003 Supplier Adcock Ingram

Item code	product item	arrived	on hold	rejected	accepted
B0012	Aminophylline 25 mg/ml vial 10 ml	10	0	0	10

ru	supplier	date	batch no.	expiry date	arrived
B4001-0473	Adcock Ingram	19/08/2003	12	08/2003	10

Aminophylline 25 mg/ml vial 10 ml 10

Print... Product class... Search...

The form shows also the receipt status of the product items (arrives, on hold, rejected and accepted). The lower table present information about receipt voucher, batch number and expiry date of the selected product item (and supplier). Summary information at product class level for each type of stock is available as well as is shown by Figure 12.17.

Figure 12.17 Value of Receipts per product class and type of stock (Cost Price - local currency)

SIGMED V3.32 - [Management information: Procurement - Receipts]

Close Cancel Refresh Delete Save Update Insert

Period: from 01/01/2003 till 31/10/2003 Catalogue items

type	value cp (MK)
A. Tablets and Capsules	1,826,876.38
B. Injctables	1,635,442.36
C. Vaccines	344,439.46
D. Raw materials	1,696,913.79
E. Calceicals	688,557.71
F. Surgical Dressings	451,734.32
G. Sutures	1,312,571.34
H. Surgical Equipment	3,114,796.56
I. Reading glasses	109.08
K. Dispensary items	26,492.58
L. Hospital equipment	467,875.36
M. Laboratory Equipment and Materials	39,098,047.74
N. X-ray films and equipment	507,392.96
P. Dental items	680,617.02
Q. Miscellaneous items	2,853.16

Total 52,154,850.92

Print...

Statistics on discrepancies (= Units arrived \diamond Units accepted) caused by reasons like missing, broken/damaged, Quality Control, is shown by Figure 12.18. See also chapter 6.2.

Figure 12.18. Receipt discrepancy information data sheet

Financial Year: 03-04 Supplier: SADM Pharmaceuticals Category: all

category	account	currency	value
sample laboratory	QT - Samples	USD	47.40

item code	product item	units	value(USD)
A0016	Aspirin 300 mg/tn 1000 tabs	1	5.60
A0367	Quinine hydrochloride 300 mg/tn 1000 tabs	2	11.80

SADM Pharmaceuticals Total(USD) 47.40

How to list the receipts for a defined period or Financial Year?

1. Choose the menu option <Management Information> → <Receipt> → period or Financial Year>. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.
Click the <Continue...> button to display the invoice data sheet (Fig. 12.15).
The suppliers and value of all deliveries in the defined period are listed in the upper table. In the lower table invoice data of the selected supplier is displayed.
2. Click the <Search...> button for a specific supplier, enter (part of) the name and press the <Continue...> button. The upper and lower tables are refreshed.
3. A report (“what you see is what you get”) is printed by clicking the <Print...> button.
4. Click <Product Items...> to open the product item receipt data sheet (Fig. 12.16). Note that by default the products of all suppliers are listed.
Click the button next to the field <Suppliers> to list the suppliers and make your selection. The upper and lower tables are refreshed. Note that only the suppliers are listed, who have made a delivery during the defined period or FY.

5. A report (“what you see is what you get”) is printed by clicking <Print...>.
6. Click <Product Class> to open the Product Class receipt form (Fig. 12.17). By default the type of stock “Catalogue items” is selected. Other types of stock can be selected by clicking the button next to the field “type of stock”. After the selection of the type of stock the table is refreshed.
7. A report (“what you see is what you get”) is printed by clicking the <Print...> button.

How to list the receipt discrepancies for a defined period or Financial Year?

8. Choose the menu option <Management Information> → <Receipt> → <Discrepancies> → period or Financial Year>.

For periods: enter the start date; the end date can be left blank. In this case the end date will be the system date.

For the FY: enter the year. Note that the value “2003” means: FY 03-04.

Click <Continue...> to list the Receipt discrepancy information data sheet (Fig. 12.18).

The discrepancies per category in the defined period are listed in the upper table. In the lower table product item data is shown of the selected category.
9. Two search criteria are available: supplier and category.
 - Click the button next to the field “Supplier” and after selection of the supplier the upper and lower tables are refreshed.
 - Click the button next to the field “Categories” and after selection of the category the upper and lower tables are refreshed.
10. Click <Search...> for selecting a product item within the discrepancy category.

12.3 Sales

The sales management information module constitutes three two modules: sales and non-availability (Fig. 12.19).

Figure 12.19 Management Information Module: Sales



12.3.1 Sales

For the defined period or FY the value of the sales orders per warehouse is listed (Fig. 12.20).

Figure 12.20 Sales per period or FY

Warehouse	value (USD)	value (MKG)	handling fee (MKG)	surtax (FAH)	total (MKG)
Central Store	23.21	2,660.20	298.43	0.00	2,668.63

invoice no.	date	value (USD)	value (MKG)	handling fee (MKG)	surtax (FAH)	total (MKG)
S004-05/25	31.05/2005	0.16	17.67	1.77	0.00	19.44
S004-05/26	31.05/2005	0.14	17.02	1.70	0.00	18.72
S001-05/27	31.05/2005	0.16	17.67	1.77	0.00	19.41
S004-05/24	30.05/2005	0.00	7.07	0.71	0.00	7.70
S004-05/19	27.05/2005	1.28	141.38	14.14	0.00	155.51
S004-05/20	27.05/2005	0.10	21.21	2.12	0.00	23.33
S004-05/21	27.05/2005	0.74	81.29	8.13	0.00	89.42
S001-05/18	26.05/2005	0.06	106.03	63.02	0.00	169.05
S004-05/16	19.05/2005	0.07	3.20	0.32	0.00	3.69
S001-05/16	13.05/2005	0.01	1.41	0.14	0.00	1.56
S004-05/13	05.04/2005	8.63	952.70	95.27	0.00	1,047.94
S004-05/12	05.03/2005	1.58	172.83	17.28	0.00	189.90
S004-05/13	05.03/2005	4.50	497.03	49.70	0.00	546.73
S004-05/10	05.02/2005	0.07	3.40	0.34	0.00	3.87
S001-05/11	06.02/2005	1.20	132.61	13.25	0.00	145.78
S004-05/01	05.01/2005	0.70	77.07	7.71	0.00	84.70
S004-05/9	05.01/2005	0.34	37.30	3.73	0.00	41.03
S004-05/6	05.12/2004	0.12	13.24	1.32	0.00	14.57

The lower table shows the invoice numbers for the defined period. Detailed information about products and customers is also provided.

Figure 12.21 Sales – product items

Close		Cancel		Delete		Save		Update		Insert		Print		Help			
Period: from				07.06.2004				till				06.06.2005					
Item code		Product item		No. of Units issued		Value (USD)		Value (MK)									
A0001		Acetazolamide tab 250 mg		1,246		3.88		488.81									
A0038		Amoxicillin 250 mg - tab		4,200		12.60		5292.00									
A0102		Chloramphenicol 250 mg tab		2,652		6.63		17582.16									
Search...				Details...				Type of stock...				Total		23.24		2,560.20	
								Handling Fee						298.43			
								Surtax									
								Total						2,858.63			

The user is able to list all the sold product items for a particular warehouse (selling point) or to refine the listing for a particular product item.

Figure 12.22 Sales: detailed product information

Period: from		07.06.2004		till		06.06.2005					
Item code		Product item		ordered		NA		issued			
A0004		Acetazolamide - tab - 250 mg		1,246		2		1,246			
A0038		Amoxicillin 250 mg tab		4,200		0		4,200			
A0102		Chloramphenicol 250 mg - tab		2,652		0		2,652			

NA = Non – Availability

More details on products are available as shown by Figure 12.22. The form provides information about the number of Units ordered (by the customer) and issued by the selected selling point (Fig. 12.21) during the defined period. Also information about non-availability (NA) is shown (see also chapter 8.1).

The corresponding report comprises monthly totals and averages of each product item as is shown by the example of Figure 12.23.

Figure 12.23 Sales Report

Pharmacy AMC Hospital		Sales Summary Report: commodities		06/06/2005	Page 1 of 1
Period: 07/06/2004 06/06/2005		No. of Units			
Month	Ordered	Non - Available	Issued		
A0001 Acetazolamide tab 250 mg					
/pnl	8	0	8		
May	1,15U	2	1,15U		
November	20	0	20		
December	10	0	10		
January	13U	U	13U		
February	10	0	10		
March	20	0	20		
Total	1,240	2	1,246		
Monthly Average	178	0	178		
A0031 Amitriptyline 25 mg tab					
March	00	00	0		
November	6U	6U	U		
Total	110	110	0		
Monthly Average	55	55	0		

Sales information by product class and type of stock is also generated (Fig. 12.24 and 12.25).

Figure 12.24 Sales: type of stock

SIGMED Lite: Supply Chain Management Tool for Health Facilities - [Management Information: Sales]						
Close	Cancel	Delete	Save	Update	Insert	Print Help
Period: from	07/06/2004	til	06/06/2005			
type of stock	value (USD)	value (MK)	handling fee (MK)	surtax (MK)	total (MK)	
Catalogue items	23.21	2,560.20	298.43	0.00	2,858.63	
<hr/>						
Total	23.21	2,560.20	298.43	0.00	2,858.63	
Product class...						

Figure 12.25 Sales: product classes

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Management information: Sales]

Close Cancel Delete Save Update Insert Print Help

Period: from 07/06/2004 till 06/08/2005

Type of stock: Catalogue Items

product class	value (USD)	value (MK)	handling fee (MK)	surtax (MK)	total (MK)
▶ A. Tablets and Capsules	23.21	2,580.20	298.43	0.00	2,858.63
Total					
	23.21	2,580.20	298.43	0.00	2,858.63

Product class...

Management information regarding customers for the defined period is shown by the Figures 12.26 through 12.29.

Figure 12.26 Sales: customers

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Management information: Sales]

Close Cancel Delete Save Update Insert Print Help

Period: from 07/06/2004 till 06/08/2005

customers	value (USD)	value (MK)	handling fee (MK)	surtax (MK)	total (MK)
▶ C.H.A.M	2.35	260.10	68.42	0.00	328.52
CENTRAL CLINICAL LAB.	2.31	254.31	25.43	0.00	279.74
CHIFUNGA HEALTH CENTRE	2.84	312.61	31.26	0.00	343.97
CHIMNI	10.20	1,125.73	112.58	0.00	1,238.37
HELENA JOHNSON	5.51	607.39	60.74	0.00	668.13
Total					
	23.21	2,580.20	298.43	0.00	2,858.63

Type of customer... Products... Search... Invoices...

Figure 12.27 Sales: product items per customer

Period: from till

Customer / Patient

Item code	Product Item	No. of Units		
		ordered	NA	issued
▶ A0004	Acetazolamide tab 250 mg	532	2	630
A0009	Amoxicillin 250 mg - tab	150	0	150
A0102	Chloramphenicol 250 mg - tab	84	0	84

NA = Non - Availability

Figure 12.28 Sales: invoices per customer

Period: from till

Customer / Patient

invoice no.	date	value (USD)	value (MK)	handling fee (MK)	surtax (MK)	total (MK)
▶ S04-05/10	05/02/2005	0.03	3.48	0.35	0.00	3.83
S04-05/16	13/06/2006	0.01	1.11	0.11	0.00	1.66
S04-05/16	19/05/2005	0.03	3.53	0.35	0.00	3.89
S04-05/18	26/05/2005	0.06	106.03	53.02	0.00	159.05
S04-05/20	27/05/2005	0.19	21.21	2.12	0.00	23.33
S04-05/25	31/05/2005	0.18	17.87	1.77	0.00	19.44
S04-05/26	31/06/2006	0.11	12.02	1.20	0.00	13.22
S04-05/27	31/06/2006	0.16	17.57	1.77	0.00	19.44
S04-05/8	05/01/2005	0.70	77.07	7.71	0.00	84.78
Total		2.36	260.10	60.42	0.00	320.52

Figure 12.29 Sales per type of customer

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Management Information: Sales]


Close Cancel Delete Save Update Insert Print Help

Periods: from till

type of customer	value (USD)	value (MK)	handling fee (MK)	surtax (MK)	total (MK)
▶ Hospitals & Health Centres	20.00	2,305.88	273.00	0.00	2,578.88
Other Government Ministries	2.34	264.21	26.42	0.00	273.74
Total		22.34	2,569.20	299.42	2,868.63

Customer / Patient:

How to list all the sales for a defined period?

1. Choose the menu option <Management Information> → <Sales> → <sales> → period or Financial Year>. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.
Click <Continue...> to list the sales data sheet (Fig. 12.20).
The value of all sales in the defined period per selling point are listed in the upper table. In the lower table the sales orders are shown of the selected warehouse.
2. A report (“what you see is what you get”) is printed by clicking <Print...>.
3. Click <Products...> to list all the sold products items for the defined period (Fig. 12.21).
4. Click the button  next to the field “Selling point” and select the warehouse. The table will be refreshed. Selling point “ALL” means that information of all warehouses is listed (=default).
5. Click <Search...> and to refine your query (product items).
6. A report (“what you see is what you get”) is printed by clicking <Print...>.
7. Click <Details...> to list more detailed product information (Fig. 12.22). Note that the information shown refers to the selected selling point in the previous form (Fig. 12.21).
8. A report (“what you see is what you get”) is printed by clicking <Print...> (fig. 12.23).
9. Click the <Close> button of the top menu bar to return to the previous form (Fig. 12.24).
10. Click <Type of stock...> to show all sales classified by type of stock for the defined period (Fig. 12.25). Note that the information shown refers to the selected selling point in the previous form (Fig. 12.22).
11. A report (“what you see is what you get”) is printed by clicking <Print...>.
12. Select the type of stock and click <Product class...> to list all sales per product class (Fig. 12.25).
13. Click the <Close> button of the top menu bar to return to the previous form (Fig. 12.24)
14. Click the <Close> button of the top menu bar to return to the previous form (Fig. 12.22).

15. Click the <Close> button of the top menu bar to return to the Sales data sheet (Fig. 12.20).
16. Click <Customers...> to list all customers for the defined period (Fig. 12.25).
17. Click <Search...>, enter (part of) the name of the customer and click <Continue...>. The table will be refreshed.
18. A report (“what you see is what you get”) is printed by clicking <Print...>.
19. Click <Products...> to show all the sold products items of the selected customer during the defined period (Fig. 12.27).
20. A report (“what you see is what you get”) is printed by clicking <Print...>.
21. Click the <Close> button of the top menu bar to return to the previous form (Fig. 12.26).
22. Click <Invoices...> to show all the invoices of the selected customer during the defined period (Fig. 12.28).
23. A report (“what you see is what you get”) is printed by clicking <Print...>.
24. Click <Close> to return to the previous form (Fig. 12.26).
25. Click the <Type of customer...> button to show the sales by type of customer during the defined period (Fig. 12.29).
26. A report (“what you see is what you get”) is printed by clicking <Print...>.

How to list the monthly consumption of the product items?

27. Go to step 1,3, 7, 8

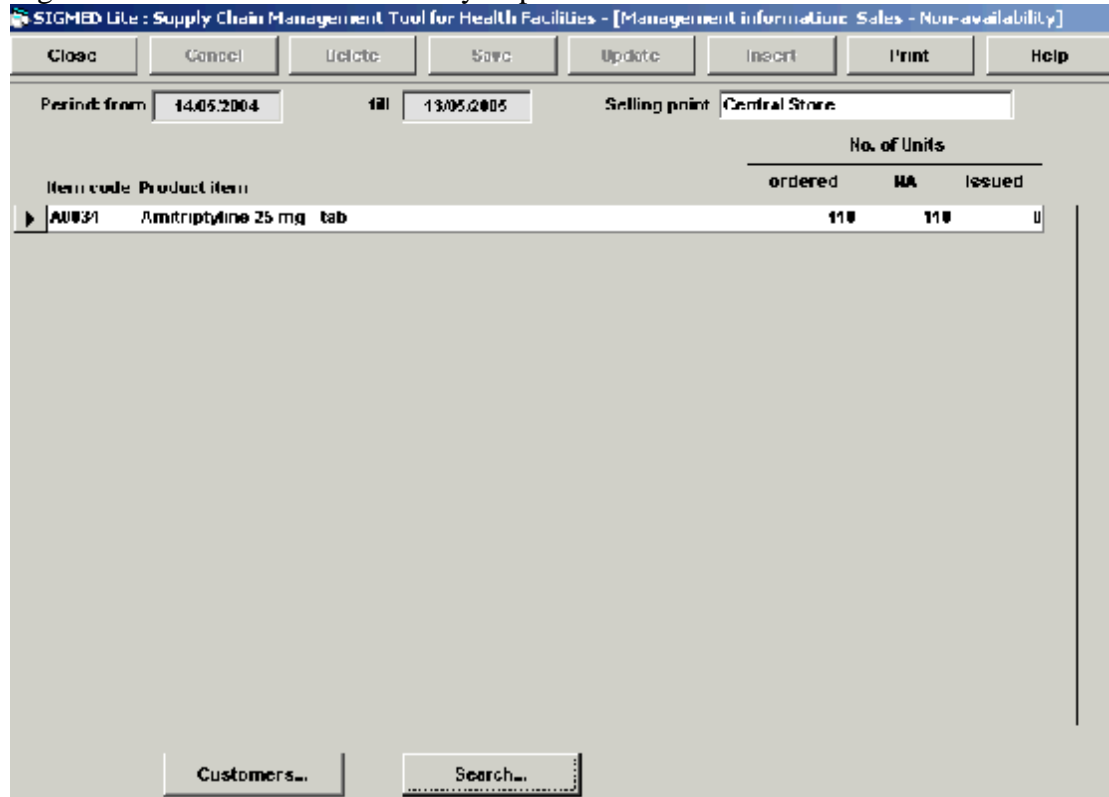
How to list the monthly demand of the product items per customer?

28. Go to step 1, 16, 19, 20

12.3.2 Non-availability

Non-availability data is an important parameter for assessing customer’s satisfaction. Non-availability is caused by stock-outs and/or rationing (see also chapter 8.1). It’s also a measure for the lost sales. SIGMED Lite provides quantitative statistics on this issue as is shown by the next figures.

Figure 12.30 Sales: Non-availability of product items



NA = Non – Availability

The customers involved and their demand are also listed (Fig. 12.31 and 12.32).

Figure 12.31 Sales: Non-availability of product items - customers



Figure 12.32 Sales: Non-availability of product items per customer



ND= Normal Demand, NA = Non – Availability

How to list the lost sales, due to stock-outs and/or rationing, for a defined period?

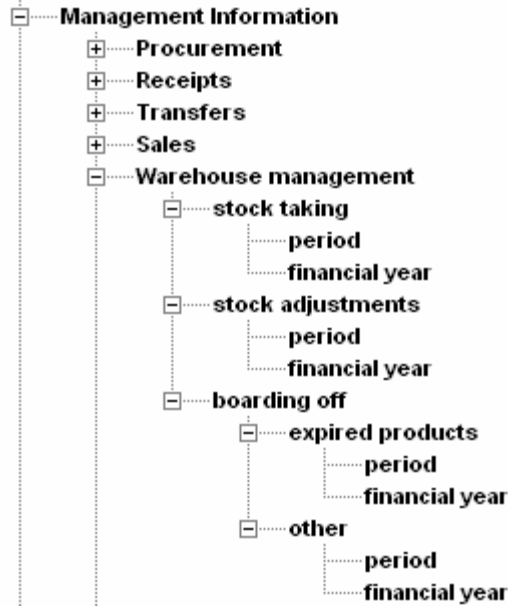
29. Choose <Management Information> → <Sales> → <Non-availability> → period or Financial Year. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.
Click <Continue...> to list the sales data sheet (Fig. 12.30).
The value of all sales in the defined period per selling point are listed in the upper table. In the lower table the sales orders are shown of the selected warehouse.
30. Click <Search...> to refine your query (product items).
31. A report (“what you see is what you get”) is printed by clicking <Print...>.
32. Click <Customers...> to list all customers involved for the defined period (Fig. 12.31).
33. Click the <Search...> button and refine your query (customers).
34. Click <Product...> to list the product items involved of the selected customer for the defined period (Fig. 12.32).
35. A report (“what you see is what you get”) is printed by clicking <Print...>.

:

12.4 Warehouse management

Management information regarding Warehouse management comprises the operations: stock taking, stock adjustments and boarding off (Fig. 12.33).

Figure 12.33 Management Information Module: Warehouse management



12.4.1 Stock taking

Figure 12.34 shows the stock take data form.

Figure 12.34 Management information: stock takes

No	Date	Currency	Stock value before stock take (I)	Stock value after stock take (II)
12	31/06/2005	MM	370,400.20	370,644.15
9	30/06/2005	MM	131,381.85	131,394.85

Total		609,683.13	610,039.00	Difference (II I)	152.87
--------------	--	------------	------------	-------------------	--------

Item code	Product item	Stock before stock take (I)	Stock after stock take (II)	Stock difference (II I)	Stock value (II I)
A0004	Acetazolamidc - tab - 250 mg	99,000	99,000	40	152.87


The upper table shows the most relevant information of each stock take: warehouse, date, and stock value before and after the stock take. Stock value is based on (estimated) cost price and expressed in the local currency.

The stock and differences of the selected stock take are presented in the lower table. By default all stock takes of all warehouses during the defined period are listed. Further selection is possible: warehouse, type (periodical vs. annual) and listing of only the stock differences. Figure 12.35 presents an example of the available report.

Figure 12.35 Report Stock take

Central Medical Stores		Inventory (stock taking)			31/10/2003			Page 1 of 1		
Financial Year: 11/11/04										
Item code	Item description	No. of Units			Value (MK)					
		before stock take (I)	after stock take (II)	difference (II - I)	before stock take (I)	after stock take (II)	difference (II - I)			
<i>Catalogue Items</i>										
<i>A: Tablets and Capsules</i>										
A0004	Acetylsalicylic acid - 250 mg - tin 100 tabs									
RMS Ulongwe	No.: 10 / Annual Stock Take	21/07/2003	218	222	-1	8111.50	8112.25	-11.75		
A0060	Ibuprofen - 5 mg - tin 1000 tabs									
RMS Ulongwe	No.: 10 / Annual Stock Take	21/07/2003	28	48	20	120.00	70.00	50.00		
A0111	Chlorpromazine 100 mg tin 1000 tabs									
RMS Ulongwe	No.: 10 / Annual Stock Take	21/07/2003	203	300	7	2,121.00	2,071.61	49.39		
A0115	Cimetidine 100 mg tin 100 tabs									
RMS Ulongwe	No.: 10 / Annual Stock Take	21/07/2003	0	1	-1	1.83	0.00	1.83		

How to list the stock takes for a defined period?

1. Choose the menu option <Management Information> → <Warehouse management> → <stock taking> → period or Financial Year>. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.
Click <Continue...> to list the stock take data sheet (Fig. 12.34).
All stock takes during the defined period are listed in the upper table. In the lower table the counted product items, belonging to the selected stock take, are shown.
2. Click <Products items...> to refine the search.
3. Click the button  next to the field “Warehouse” and select the warehouse. The upper and lower tables will be refreshed.
4. Select the radio button “Differences: Yes” to display only the product items with discrepancies in stock (lower table) for the selected stock take (upper table). The default is “No”.
5. Select the radio button “Annual Stock take” to list only the annual stock takes (upper table) during the defined period. The default is “All”.

6. Select the radio button “Periodical Stock take” to list only the periodical stock takes (upper table) during the defined period. The default is “All”.
7. A report (“what you see is what you get”) is printed by clicking <Print...> (Fig. 12.35).

12.4.2 Stock adjustments

Figure 12.36 presents management information data sheet regarding stock adjustments.

The upper table shows the most relevant information of each stock adjustment: warehouse, date, and stock value before and after the stock adjustment. Stock value is based on (estimated) cost price and expressed in the local currency.

The stock adjustments of the selected stock take are presented in the lower table.

Figure 12.36 Management information: stock adjustments

Period: from till

No	Date	Currency	Stock value before stock take (I)	Stock value after stock take (II)		
7	30.05.2006	MK	313,659.11	313,182.71		
8	30.05.2006	MK	313,176.88	312,871.26		
11	30.05.2006	MK	311,301.11	311,295.30		
2	27.05.2005	MK				
Total			1,028,010.63	1,027,639.27	Difference (I-II)	-411.26

Item code	Product item	Stock before stock take (I)	Stock after stock take (II)	Stock difference (I - II)	Stock value (I - II)
A0004	Acetazolamide - tab - 250 mg	89,800	89,880	-20	-16.43

How to list the stock adjustments for a defined period?

8. Choose the menu option <Management Information> → <Warehouse management> → <stock adjustments> → period or Financial Year>. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.

Click <Continue...> to list the stock adjustment data sheet (Fig. 12.36).
All stock adjustments during the defined period are listed in the upper table. In the lower table the counted product items, belonging to the selected stock adjustment, are shown.

9. Click <Products items...> to refine the search.

10. A report (“what you see is what you get”) is printed by clicking <Print...>.

12.4.3 Boarding off

The withdrawal of product items (boarding off) constitutes two categories: 1) expired products (or products to expire) and 2) other (obsolete products, quality control, damaged, etc).

Figure 12.37 presents an example of the statistics for the boarding off of the category “expired” products during a by the user defined period.

Figure 12.37 Boarding off: category “other” products

The screenshot shows the SIGMED Lite interface for 'Supply Chain Management Tool for Health Facilities'. At the top, there are buttons for 'Close', 'Cancel', 'Delete', 'Save', 'Update', and 'Ins'. Below these is a 'Financial Year' dropdown menu set to '04-05'. The main area contains a table with the following data:

Treasury no.	date	value cp (MK)
A1222	13/05/2005	0.00

Below the table, there is a 'total (MK)' field with the value '0' and a 'Products...' button.

Stock values are based on the estimated cost price and are expressed in the local currency.

Information about product items is shown by Figure 12.38.

Figure 12.38 Boarding off – category “expired” products: details

Financial Year: 01 06 Reason: All

item code	product item	reason	no. of units
A0102	Chloramphenicol 250 mg - tab	Quality control	2

Treasury no.	date	units
A1222	13/05/2005	2

Chloramphenicol 250 mg - tab - Total: 2

The lower table shows the number of Units written off, the date(s) and the Treasury approval number(s) of the selected product item.

Product class information is generated as well (Fig. 12.39)




Figure 12.39 Boarding off – category “expired” products per product class

Period: from 01/01/2003 till 01/11/2003 Catalogue items: ...

Type	value up (Mk)
HL Surgical Equipment	3,300.00

How to list the boarded off products for a defined period?

11. Choose the menu option <Management Information> → <Warehouse management> → <Boarding off> → <expired product> → period or Financial Year>. For periods enter the start date; the end date can be left blank. In this case the end date will be the system date.
For the FY: enter the year. Note that the value “2003” means: FY 03-04.
Click <Continue...> to list the boarding off – “expired” products data sheet (Fig. 12.37).
12. A report (“what you see is what you get”) is printed by clicking <Print...>.
13. Click <Products...> to open the product data form (Fig. 12.38). Data presented in the lower table is based on the selected product item (upper table).

14. Click <Search...> to refine the query (product item).
15. Click the button  next to the field “Warehouse” and select the warehouse. The table will be refreshed. Warehouse “ALL” means that information of all warehouses is listed (=default).
16. A report (“what you see is what you get”) is printed by clicking <Print...>.
17. Click <Product class...> to display all boarded off product items per product class .(Fig. 12.39).
18. By default the type of stock “Catalogue items” is selected. Other types of stock can be selected by clicking the button . After selecting the type of stock the table is refreshed.
19. A report (“what you see is what you get”) is printed by clicking <Print...>.
20. Click the <Close> button of the top menu bar to return to the previous form (Fig. 12.38).
21. Click <Product class...> to list all boarded off product items per product class (Fig. 9.48).
22. By default the type of stock “Catalogue items” is selected. Other types of stock can be selected by clicking the button . After selecting the type of stock the table is refreshed.
23. A report (“what you see is what you get”) is printed by clicking <Print...>.
24. Click the <Close> button of the top menu bar to return to the previous form (Fig. 9.46).

12.5 Product Items

This sub-module provides valuable information about remaining shelf life and stock on hand (Fig. 12.40). It enables the user to monitor the stock, so that he could take necessary actions to prevent expiring of the stock.

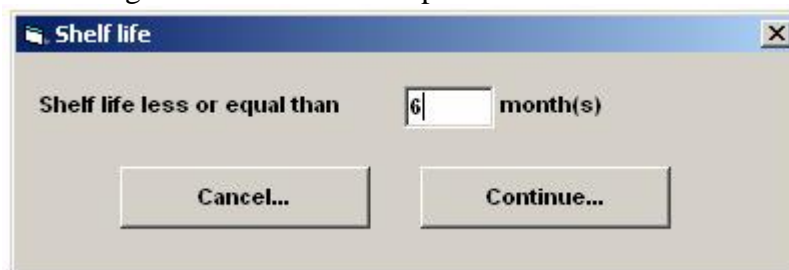
Figure 12.40 Management Information Module: Product Items



12.5.1 Shelf life

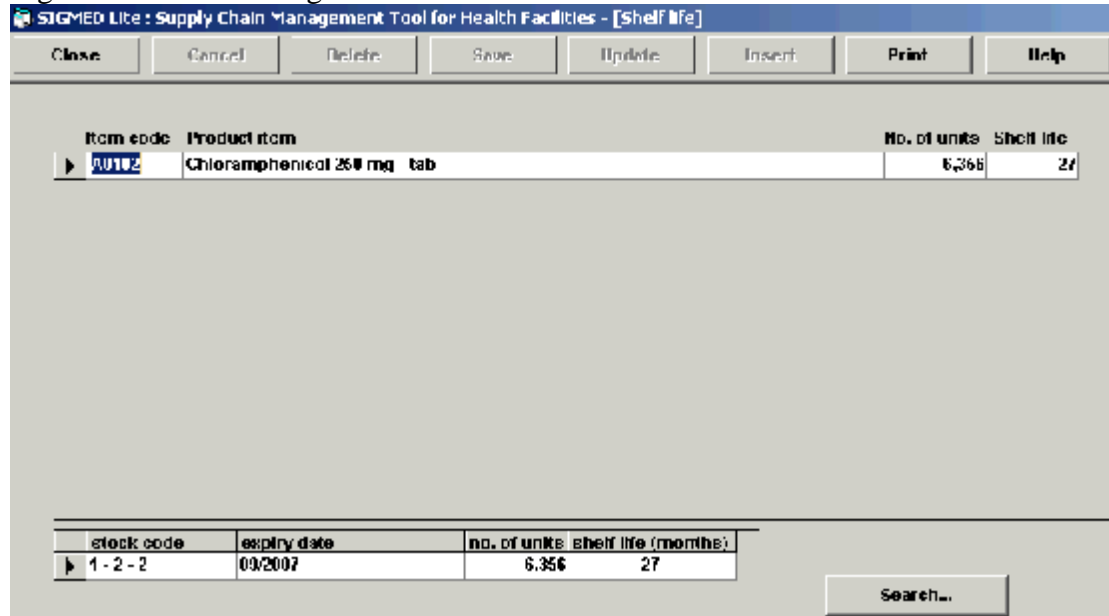
When activating the sub-menu “Shelf life” the user will be prompted to enter the maximum remaining shelf life. The remaining shelf life is defined as the number of months from the system date till expiry date (Fig. 12.41).

Figure 12.41 Shelf life input form

A screenshot of a dialog box titled 'Shelf life'. The dialog box has a blue title bar with a close button (X) in the top right corner. The main area is light gray and contains the text 'Shelf life less or equal than' followed by a text input field containing the number '6', and the text 'month(s)'. Below the input field are two buttons: 'Cancel...' on the left and 'Continue...' on the right.

Subsequently, SIGMED lists all product items that comply with the condition (Fig. 12.42). Results can also be listed per warehouse.

Figure 12.42 Remaining shelf life of stock



Two types of reports are available. The Figures 12.44 and 12.45 show the examples.

Figure 12.44 Remaining shelf life and value (purchase price, USD) of selected product items

Central Medical Stores ShelfLife 31/10/2003 Page 1 of 16
 Warehouse: ALL

Item code	Product item	Batch number	Shelf life (months)	Expiry date	Units	Unit Cost Price (USD)	Value (USD)
Catalogue items							
<i>A. Tablets and Capsules</i>							
00014	Amidapipiline - 25 mg - tin 100 tabs	D-01	6	03/2004	130	1.00	130.00
00031	Amtripyline - 25 mg - tin 1000 tabs	111-4	0	10/2003	100	1.00	100.00
00039	Amoxycillin - 250 mg - tin 1000 tabs	104812	2	11/2003	80	16.32	1305.60
00038	Bisacodyl - 5 mg - tin 1000 tabs	49700	-2	07/2003	159	2.50	397.50

Figure 12.45 Remaining shelf life, stock code and batch number of selected product items

Central Medical Stores Shelf Life - stock codes 31/10/2003 Page 1 of 21
 Warehouse: RMS Mizuzu

Stock code	Batch number	Shelf life (months)	Expiry date	Units
Catalogue items				
<i>A. Tablets and Capsules</i>				
00034 Amtripyline - 25 mg - tin 1000 tabs				
1 - 11 - L3	D-01	6	03/2004	130
1 - 11 - L4	111-4	0	10/2003	100
				Total: 440
00039 Amoxycillin - 250 mg - tin 1000 tabs				
2 - 6 - L1	104812	2	11/2003	80
				Total: 80
00038 Bisacodyl - 5 mg - tin 1000 tabs				
2 - 7 - L1	49700	-2	07/2003	59
2 - 7 - L2	49700	-2	07/2003	100
				Total: 159

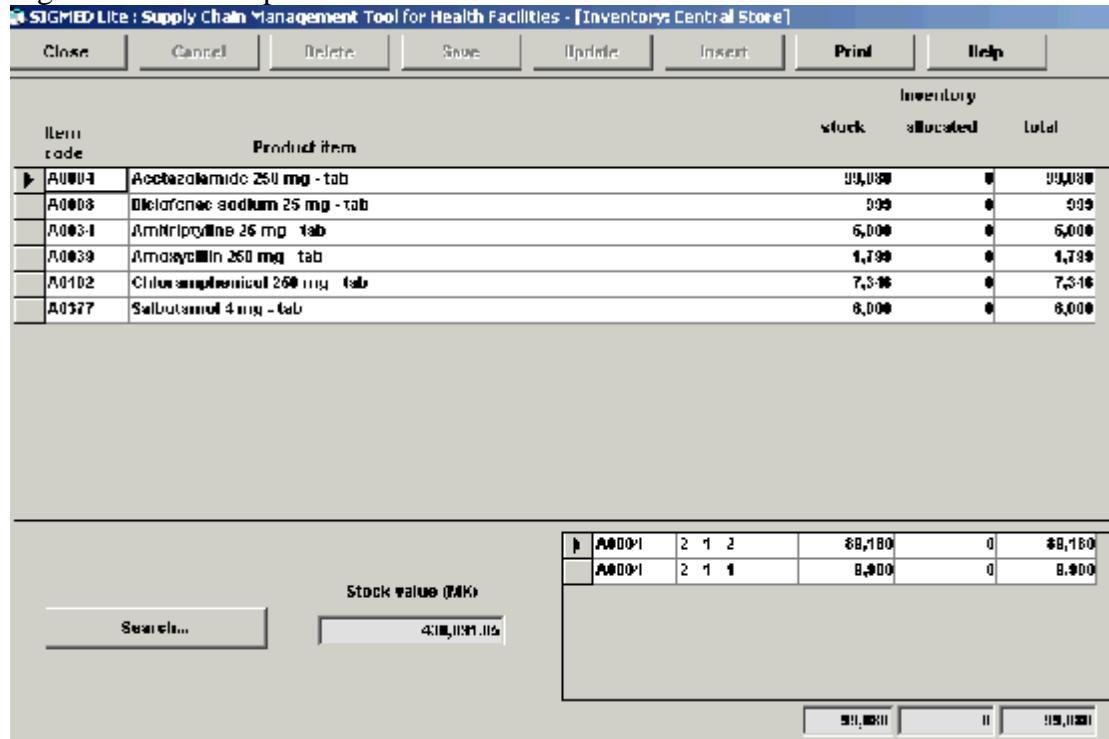
How to list the remaining shelf-life of the stock?

1. Choose the menu option <Management Information> → <CMS Product Items> → shelf life>. Enter the remaining shelf life (in months) and click <Continue...> (Fig. 12.41) to open the product data form (Fig. 12.42).
2. Click <Search... > to refine the query (product item)
3. Click the <Close> button of the top menu bar to return to the previous form.
4. Click the <Print... > button to create the report as shown by Figure 12.44.
5. Click <Print: Stock Codes... > to create the report as shown by Figure 12.45.

12.5.2 Stock

The sub-module “Stock” enables the user to consult the stock position of the products. Only the products items with stock are listed. Figure 12.46 displays the form. The inventory is split in three parts: *stock*, *allocated* and *total*.

Figure 12.46 Stock position



Allocated stock refers to stock from unconsolidated transactions (e.g. transfers, sales). Total stock is stock on hand + allocated stock.

The lower table shows the stock codes of the selected product item. Two different reports are available: one indicates the cost price and stock value; the other the batch number, expiry date and stock code.

Figure 12.47 Stock report – cost price and stock value (MK)

CMS - inventory

01/11/2009

Item Description	Cost price (MK)	Stock	Allocated	Stock total	Value (MK)
Warehouse: RMC: Harthyr					
Catalogue items					
A. Tablets and Capsules					
A1114 Acetazolamide - 250 mg - tin 100 tabs	248.42	2711	0	2711	672,143.22
A0008 Diclofenac sodium 25 mg tin 100 tabs	04.40	2,950	0	2,950	129,907.00
A1152 Nicotinamide - 500 mg - tin 1000 tabs	1000.00	175	0	175	175,000.00
A0038 /minophylline 100 mg/ml tin 1000 tabs	272.00	0	07	07	18,230.30
A1114 Amitriptyline - 75 mg - tin 1000 tabs	800.70	275	0	275	220,192.50
A0039 Amoxicillin - 250 mg - tin 1000 tabs	1,480.19	11,155	1,349	12,504	18,508,313.27

Figure 12.48 Stock report – stock code

CENTRAL MEDICAL STORES - inventory

item code	item description	stock code	batch no	expiry date	stock	01/11/2003 stock allocated	page total
Warehouse RMS Blanket Catalogue Items							
A. Tablets and Capsules							
A0001	Acetazolamide 250 mg tin 100 tabs	2-1-11	14078	08/2005	270	0	270
A0008	Diclofenac sodium - 25 mg - tin 100 tabs	2-2-11 2-2-12	151008 151008	07/2008 07/2008	550 2,400	0	550 2,400
A0022	Nicotinamide - 50 mg - tin 1000 tabs	2-3-11 2-3-12	110700 110700	00/2005 00/2005	25 150	0	25 150
A0028	Amitriptyline - 100 mg/ml - tin 1000 tabs	4-4-12	882320	12/2005	0	87	87
A0004	Amitriptyline - 25 mg - tin 100 tabs	2-4-11	00201	02/2005	726	0	726

How to list the stock position?

6. Choose the option <Management Information> → CMS Product Items> → stock> to open the stock data form (Fig. 12.46). Note that only the products items with stock are listed.
The lower table shows the stock code(s) of the selected product item.
7. Click <Search...> to refine the query (product item).
8. Click <Print (stock codes)...> to print the report as shown by Figure 12.48.
9. Click <Print (products)...> to print the report as shown by Figure 12.47.

12.6 Stock movements

SIGMED Lite provides aggregated information about monthly stock movements.

Stock movements refer to:

1. Receipts (Transit warehouses)
2. Sales
3. Boarding off
4. Stock control

Figure 12.49 shows the stock movement form. For each month the opening balance and closing balance is presented.

Figure 12.49 Monthly stock movement

The screenshot shows the 'Monthly stock movements' form in SIGMED Lite. At the top, there is a menu bar with options: Close, Cancel, Delete, Save, Update, Invert, Print, and Help. Below the menu bar, there is a 'Year' dropdown menu currently set to '2005'. To the right of the year dropdown are buttons for 'Year...', 'January - June...', 'July - December...', 'Search...', and 'Update...'. The main area contains a list of product items with columns for 'Item code' and 'Product Item'. The items listed are: A0004 Acetazolamide 250 mg - tab, A0008 Uricloence sodium 25 mg - tab, A0034 Amitriptyline 25 mg - tab, A0039 Amoxicillin 250 mg - tab, A0102 Chloramphenicol 250 mg - tab, A0577 Salbutamol 4 mg - tab, and U0124 Chloroform 125 mg/ml - bottle 500 ml - tab. Below this list, the selected item 'Acetazolamide 250 mg - tab' is shown with its 'Stock position' as '9553'. The bottom part of the screenshot displays a table of transactions for this item.

transaction	January	February	March	April	May	June	total
Opening	969	009	849	050	046	96,533	
Receipts			99	10	100,760		100,869
Boarding off				-20	-877		-897
Stock take			-10		-346		-356
Sales	80	00	80	32	1,060		1,252
Sales - return of goods					10		10
Closing	889	809	859	846	95,533	95,533	

The lower table shows the transactions of the selected product item. The presentation comprises two periods: January – June and July – December. The column “Total” refers to the whole year.

Details of every transaction are available. Examples are given by the figures 12.50 – 12.54.

Figure 12.50 Stock movements: receipts

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Monthly stock movements - Receipts]

Close Cancel Delete Save Update Insert Print

Period: from 01/01/2005 till 31/12/2005

Item code A0004 Acetazolamide 250 mg - tab

supplier	receipt no.	no. of units
▶ Central Medical Stores	R/04-05/7	90,050
Central Medical Stores	R/04-05/6	9,900
Central Medical Stores	R/04-05/5	800

Acetazolamide 250 mg - tab Total 100,750

stock code	batch number	expiry date	units
▶ 2 - 1 - 2	55333	10/2008	90,050

Central Medical Stores R/04 05/7 total 90,050

The upper table presents all receipt voucher numbers, the suppliers and the number of Units of the selected product item. The lower table shows the stock codes, batch numbers and expiry date of the selected product and supplier (upper table). The number of Units refers to the accepted quantity.

Figure 12.51 Stock movements: boarding off

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Monthly stock movements - Boarding off]

Close Cancel Delete Save Update Insert Print

Period: from 01.01.2005 till 31.12.2005

Item code A0004 Acetazolamide 250 mg - tab

reason	treasury no.	date	units
▶ Expired	Ass	01.04/2005	10
Expired	d	31.05/2005	646
Quality control	A123	17.05/2005	1
Quality control		31.05/2005	30
Others	S31	01.04/2005	10

Acetazolamide 250 mg - tab - Total 697

stock code	batch no.	expiry date	units
▶ 1 - 1 - 3	A344	10/2005	10
1 - 1 - 2	Ass23	06/2005	646

Central Store - Total 656

An example of boarding-off transactions is shown by Fig. 12.51. Details of the batch are presented in the lower table.

Stock movement details due to inventory control are presented by Table 12.52. The theoretical (“stock before”) and physical (“stock after”) are listed per batch in the lower table.

Figure 12.52 Stock movements: stock take

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Monthly stock movements - Stock control]

Period: from till

Item code

no.	stock control	before	after	difference
7	Stock adjustments	89,900	89,880	-20
8	Stock adjustments	89,800	89,720	-80
11	Stock adjustments	89,310	89,305	-5
12	Periodical stock take	89,140	89,100	-40

Acetazolamide 250 mg - tab - Total

stock code	batch no.	expiry date	before	after	difference
2 - 1 - 2	SS333	10/2008	89,900	89,880	-20

Central Store - Stock adjustments (No.7) Total

Figure 12.53 and 12.54 show the example of stock movements due to sales and return of goods transactions.

Figure 12.53 Stock movements: sales

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Monthly stock movements - sales]

Close Cancel Delete Save Update Insert Print

Period: from 01/01/2005 till 31/12/2005

Item code A0004 Acetazolamide 250 mg - tab

	customer / patient	invoice	date	no. of units
▶	C.H.A.M	S/04-05/10	05/02/2005	10
	C.H.A.M	S/04-05/15	13/05/2005	4
	C.H.A.M	S/04-05/16	19/05/2005	10
	C.H.A.M	S/04-05/18	26/05/2005	300
	C.H.A.M	S/04-05/20	27/05/2005	60
	C.H.A.M	S/04-05/25	31/05/2005	50
	C.H.A.M	S/04-05/26	31/05/2005	34
	C.H.A.M	S/04-05/27	31/05/2005	50
	C.H.A.M	S/04-05/8	05/01/2005	12
	CENTRAL CLINICAL LAB.	S/04-05/12	05/03/2005	20
	CENTRAL CLINICAL LAB.	S/04-05/24	30/05/2005	20
	CHIFUNGA HEALTH CENTRE THE OFFICER-IN-CHA	S/04-05/19	27/05/2005	400
	CHIPINI	S/04-05/14	05/04/2005	8

Acetazolamide 250 mg - tab - Total 1,216

	stock code	batch no.	expiry date	no. of units
▶	1 - 1 - 1	LK235	10/2000	10

S/04-05/10 - Total 10

Figure 12.54 Stock movements: Sales – return of goods

SIGMED Lite: Supply Chain Management Tool for Health Facilities - [Monthly stock movements - Return of goods (sales)]

Close Cancel Delete Save Update Insert Print Help

Period: from 01/01/2005 till 31/12/2005

Item code A0004 Acetazolamide 250 mg - tab

customer / patient	credit invoice no.	date	no. of units
C.H.A.M	S/04-05/15/C11	13/05/2005	1

Acetazolamide 250 mg - tab - Total 1

stock code	batch no.	expiry date	no. of units
1 - 1 - 1	LK235	10/2003	1

S/04-05/15/C11 - Total 1

How to list/print the stock movement?

1. Choose the menu option <Management Information> → <Stock movements> to open the stock movements form (Figure 12.49)
Product items are presented in the upper table. The lower table presents the monthly transactions of the selected product item. Opening and closing balances are listed as well. The actual stock position is shown by the field “Stock”.
2. Click <Year...>, enter the new value and click <Continue...>. The tables will be refreshed for the new year. By default the current year is listed.
3. Click the <January...June> button to list the data for the period January – June of the selected year.
4. Click the <July...December> button to display the statistics for the period July – December of the selected year.
5. Click <Search...> to refine the query (product items).
6. A report (“what you see is what you get”) is printed by clicking <Print...>.
7. The button <Details...> will be enabled when selecting a transaction in the lower table. Select the transaction (lower table) and click <Details...> to open the corresponding detail form (see Fig. 12.50 – 12.54).

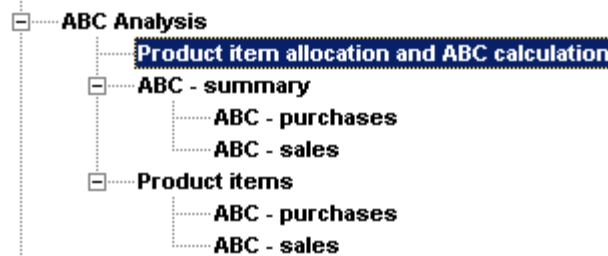
8. Every detail form can be printed by clicking <Print...>.

12.7 ABC Analysis

The ABC analysis reveals the often encountered expression of the Pareto principle where a relatively small number of product items may account for 80 % or more of the total cost.

SIGMED categorizes items into three classes approach depending on their purchase value. Class A items account for 80 % of the total value, Class B items account for 15 % while class C represents only 5 % of the total value. In general class A items are usually fewer in number, but very costly (or high-volume) thus accounting for a very high value. In contrast, class C items are many in number, are relatively cheap (or low-volume) and thus contribute relatively little to the total value.

Figure 12.55 Management Information: ABC Analysis



The module constitutes three sub-modules as is shown by Figure 12.55. The ABC analysis is based on the purchase and the sales value of the products during the (selected) financial year.

Calculation and product allocation are the main functions of the first sub-module. Figure 12.56 presents the form.

Figure 12.56 ABC Analysis. Calculation and product allocation

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Products ABC analysis]

Close Cancel Delete Save Update Insert Print

Financial Year 04-05 ...

item code	product item
A0004	Acetazolamide 250 mg - tab
A0000	Diclofenac sodium 25 mg - tab
A0012	Folic acid 5 mg - tab
A0013	Ibuprofen 200 mg - tab
A0028	Aminophylline 100 mg/ml tab
A0034	Amitriptyline 25 mg - tab
A0039	Amoxicillin 250 mg - tab
A0046	Aspirin 300 mg - tab
A0069	Disacodyl 5 mg - tab
A0102	Chloramphenicol 250 mg - tab
A0115	Cimetidine 400 mg - tab
A0144	Diazepam 5 mg - tab
A0173	Erythromycin 250 mg - tab
A0187	Fluconazole 200 mg - tab
A0194	Griseofulvin 125 mg - tab
A0224	Ivermectin 6 mg - tab
A0377	Salbutamol 4 mg - tab
A0405	Cotrimoxazole 480 mg - tab
A0445	Vitamin A 200000 IU - tab
H0012	Aminophylline 75 mg/ml - uial 100 ml - inj
D0002	Dextrose 50 % - ampoule 20 ml - inj
B0064	Diazepam 5 mg/ml - ampoule 2 ml - inj
B0084	Fluconazole 2 mg/ml - ampoule 25 ml - inj

Products excluded from ABC analysis... Search... Refresh ABC analysis...

ABC - purchases ABC - sales

Results are presented in two ways: classification by product item (purchases – sales) and as a summary view.

Figure 12.57 ABC Analysis – product item classification

SIGMED V3.32 - [ABC analysis]

Close Cancel Refresh Delete Save Update Insert

Financial Year: 03-04

No.	Product item	Purchase price	No. of Units	Amount (USD)	% of total value	% cum. total value	
1	Nicotinamide - 50 mg - tin 1000 tabs	9.71	100	1,748	34.37%	34.38	A
2	Amoxicillin - 250 mg - tin 1000 tabs	16.32	50	816	16.29%	50.67	A
3	Turbine hp, Integrated F/Omaeh lite (HSK) pack	103.50	2	207	4.14%	54.81	A
4	Bisacodyl - 5 mg - tin 1000 tabs	2.50	200	500	9.85%	64.66	A
5	Blood grouping serum Anti-A - 5 ml - pack	2.10	200	420	8.40%	73.06	B
6	Acetazolamide - 250 mg - tin 100 tabs	2.75	80	220	4.32%	77.38	B
7	Benzhexol - 5 mg - tin 100 tabs	1.10	200	220	4.32%	81.70	C
8	Culture swabs, sterile - - pack of 100	15.00	17	255	5.06%	86.76	C
9	Gutta Porcha points - PU 15-89 - set	10.75	2	21.5	0.43%	87.19	C

Print... Search... Summary...

No. of items: 9
Total value (USD): 5,084

Figure 12.57 shows the ranking, the % of the total value, the cumulative % of the total value and the classification. In the hypothetical example of Figure 12.57 4 products are classified as A; two product as B and 3 products as C.

Figure 12.58 ABC Analysis. Summary data form

SIGMED V3.32 - [ABC analysis (summary)]

Close Cancel Refresh Delete Save Update Insert

Catalogue items

Year: 03-04

	ABC-class			
	A	B	C	Total
No. of items	4	2	3	9
% of Total number of products	44.4	22.2	33.3	100
Total value (USD)	4,037	656	391	5,084
% of Total value	79.3	12.9	7.8	100

Print...

The summary is shown by Figure 12.58. It shows that 44 % of the products account for almost 79% of the costs.

How to exclude a product item from the ABC analysis?

There are two options. Option I is described in chapter 10.2.1.

The steps of the second option are as follows:

1. Choose the menu option <Management Information> → <ABC Analysis> → product item allocation and ABC calculation>.
2. By default, the product items, which are considered for the ABC analysis, are listed. Double click the product item you want to exclude. After confirmation SIGMED Lite exclude the product item from the analysis. The table will be refreshed.
3. Click the <Products excluded from ABC analysis...> button to list the products, which are excluded (Fig. 12.56)


How to make a product item part of the ABC analysis?

There are two options. Option I is described in chapter 10.2.1.

The steps of the second option are as follows:

4. Choose the menu option <Management Information> → <ABC Analysis> → product item allocation and ABC calculation>.
5. Click the <Products excluded from ABC analysis...> button to list the products which are excluded (Fig. 12.56).
6. Click the <Search...> button to refine the query (product items).
7. Double click the product item you want to include. After confirmation SIGMED includes the product item. The table will be refreshed.
8. Click the <Products ABC analysis...> button to list the products, which are included (Fig. 12.56)


How to perform the ABC analysis?

9. Choose the menu option <Management Information> → <ABC Analysis> → product items allocation and ABC calculation>.
10. Click the button  next to the field “Financial year”, enter the new value and click the <Continue...> button. Note that the value “2003” means: FY 03-04.
11. Click the <Search...> button to refine the query (product items).
12. Click the <ABC...> button to list the result (Fig. 12.57).
13. Click the <Summary...> button to display the summery view (Fig. 12.58).

How to list the ABC class status of a product item?

14. Select the menu option <Management Information> → <ABC Analysis> → ABC product items> to list all product items for the current financial year

(=default) (Fig. 12.57). The ranking, the purchase cost as % of the total value and as cumulative % of the total value and the classification are shown for each product item.

15. Click the button  next to the field “Financial year”, enter the new value and click <Continue...>. Note that the value “2003” means: FY 03-04
16. Click the <Search...> button to refine the query (product items).
17. Click the <Summary...> button to list the summary view (Fig. 12.58).
18. Click the <Print...> button to print the report.

12.8 Tracking and tracing

Tracking and tracing is one of SIGMED’s powerful features. It can be used when a product item is re-called. Products items are tracked and traced down from supplier to customer. It is based on three principles: stock codes, product item names and batch numbers (Fig. 12.59).

Figure 12.59 Management Information: tracking and tracing



After entering (part of) the stock code, the product item name or batch number SIGMED displays the result of the query (Fig. 12.60).

Figure 12.60 Tracking and tracing: stock codes results data sheet – receipt and sales

item code	product item	batch no.
A0001	Acetazolamide - tab - 250 mg	As11
A0004	Acetazolamide - tab - 250 mg	As23
A0004	Acetazolamide - tab - 250 mg	LR235
A0004	Acetazolamide - tab - 250 mg	SS333
A1103	Amphetamine 25 mg - tab	R1127
A0031	Amphetamine 25 mg - tab	K1112
A1105	Amoxicillin 250 mg - tab	K1105

Receipts : Acetazolamide - tab - 250 mg (Batch No: As23)

supplier	RV	date	batch no.	expiry date	received
dsdsd	R04-05-05	17-05	As23	06-2005	100

Sales : Acetazolamide - tab - 250 mg (Batch No: As23)

Supplier: dsdsd

customer / patient	sales order	rcq. no.	date	batch no.	expiry date	units
CENTRAL CLINICAL LAB.	S04-05-24	y55	30-05-2005	As23	12-2006	10
C.H.A.M	S04-05-26	dtd	31-05-2005	As23	06-2005	34
C.H.A.M	S01-05-27	a	31-05-2005	As23	06-2005	60

In the first (upper) table all product items that comply with the search criteria are listed. In the second table the receipt data (supplier, date, receipt voucher) of the selected stock code batch number (Fig. 12.60) are displayed. In the lower table all relevant sales data of the selected stock code is shown.

Information about warehouse management is also available. Moreover, the present stock position and location are also shown. An example is presented by Figure 12.61.

Figure 12.61 Tracking and tracing: results data sheet –boarding off and stock position

SIGMED Lite : Supply Chain Management Tool for Health Facilities - [Tracking and tracing]

Close Cancel Delete Save Update Insert

Boarding off : Acetazolamide - tab - 250 mg (Batch No.: SS333)

	reason	Treasury no.	date	units
▶	Quality control		31/05/2005	30

Stock position : Acetazolamide - tab - 250 mg (Batch No.: SS333)

	stock code	batch number	expiry date	No. of units	
				in stock	allocated
▶	2 - 1 - 2	SS333	10/2008	86,633	0

Total 86,633 0

How to perform tracking and tracing?

1. Select the menu option <Management Information> → <Tracking and Tracing>.
 - Choose “stock code” if you know (part of) the stock code, enter the value and click <continue...> to open the result form.
 - Choose “product item” if you know only the product item name, enter the value and click <continue...> to open the result form.
 - Choose “batch number” if you know only (part of) the batch number, enter the value and click <continue...> to open the result form.

Stock codes: the receipt data and sales data shown are based on the selected batch number (upper table).

Product item, batch number: the receipt data is based on the selected batch number (upper table). The sales data depend on the select supplier/receipt voucher (second table).

2. Click <Search...> to refine the query.
3. Click the <Search batch no....> button to refine the query.

4. Click the <More...> button to list detailed information about boarding off and stock position and location of the selected product item (batch).
5. Click <Print...> to refine the query.