Pharmacy Information System (PhIS)
and
Clinic Pharmacy System (CPS)

System Design Document
(SDD)

Manufacturing

Galenical

Version	**: 1.0**
Document ID	**: PhIS_CPS/SDD/MANF/GAL**

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REVISION HISTORY

Version No	Date of Release	Prepared by	Reviewed by	List of changes from Previous Version
1.0	12/06/2018	Ilya Syarah	Chew Ming Ping	Document baseline

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Table of Content

1. INTRODUCTION 3

2. PURPOSE 3

3. DETAILED SYSTEM DESIGN 4

3.1 MANUFACTURING OVERVIEW 4
3.2 GALENICAL 4
3.2.1 Overview 4
3.2.2 Block Diagram 4
3.2.3 Formulation 5
3.2.4 Work Order 20
3.2.5 Integration 52

4. REFERENCES 53

5. ACRONYMS 53

6. APPENDIX 53

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1. Introduction

Pharmaniaga Logistics Sdn. Bhd. executes software development, enhancement and maintenance projects for its clients. The term “project” is used to describe the full set of activities from the time the proposal is accepted and project initiation note or contract is signed to the time all the software and services are delivered according to the acceptance of the proposal/contract.

This process is to ensure both user requirements and software requirements of the projects developments are gathered appropriately from stakeholders and are documented in User Requirements Specification (URS) and System Design Documentation (SDD) specifically.

2. Purpose

The purpose of the document is to describe the purpose and functionality of the software product requested by client. This document outlines the project's details, requirements, interface, design issues, and components to ensure that each requirement has been met.

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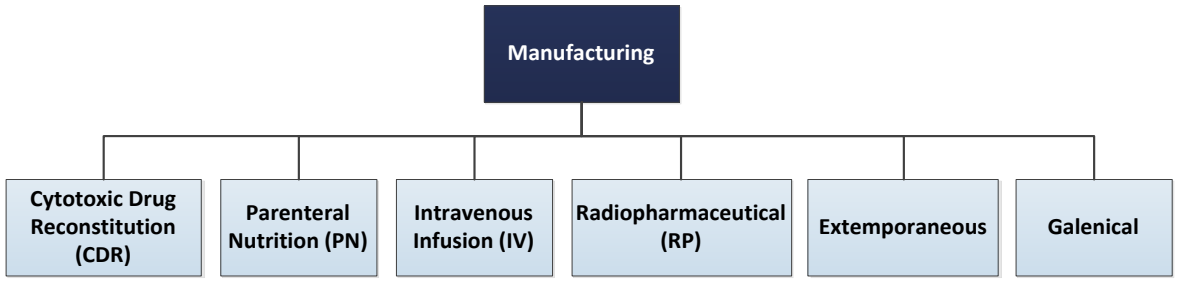
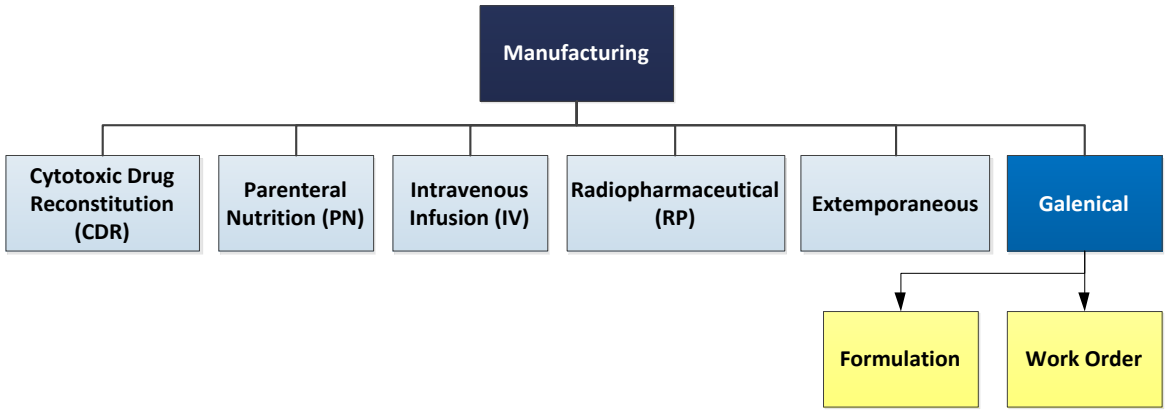
3. Detailed System Design

3.1 Manufacturing Overview

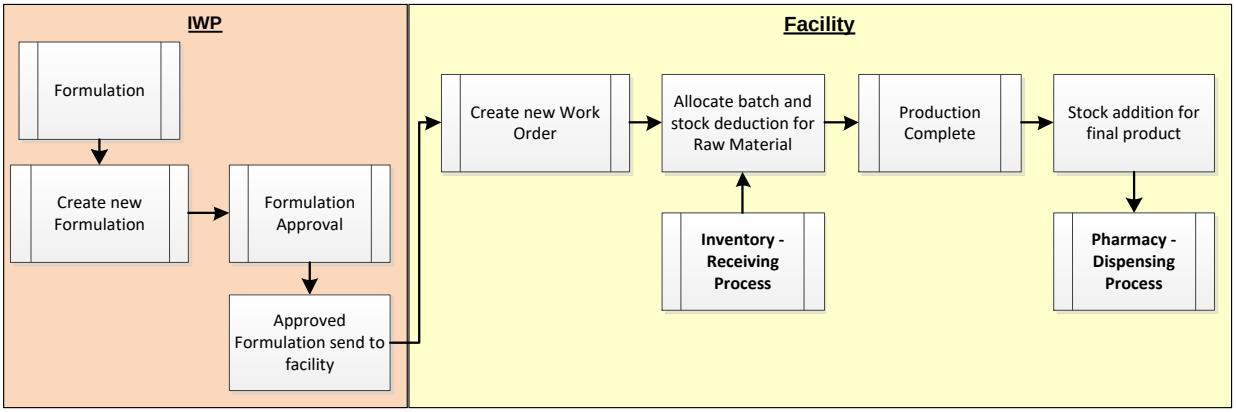


3.2 Galenical

3.2.1 Overview



3.2.2 Block Diagram



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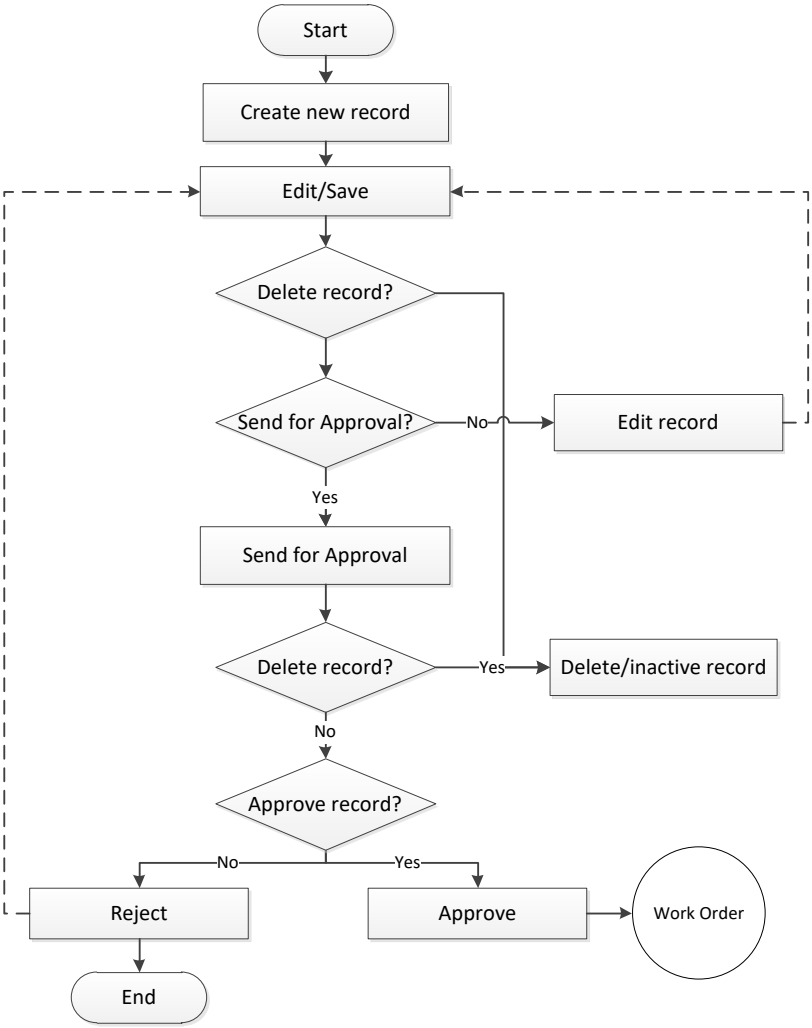
3.2.3 Formulation

Formulation screen is for HQ user to create new formula to manufacture products. The manufactured products must already exist as a new drug in Drug Master and new item in Item Master.

During creation of new Formulation record, user requires to enter the formulation product details including the materials and procedures involved. Only materials are mandatory for each formulation, procedures are not mandatory.

Each newly created formulation must be approved before the status updated to Active and will sync to other facilities for facility users to create new Work Order record. Facility users are not allowed to edit the HQ created Formulation. Any update or request for new formulation by each facility must be communicated with HQ.

3.2.3.1 Screen Navigation Diagram



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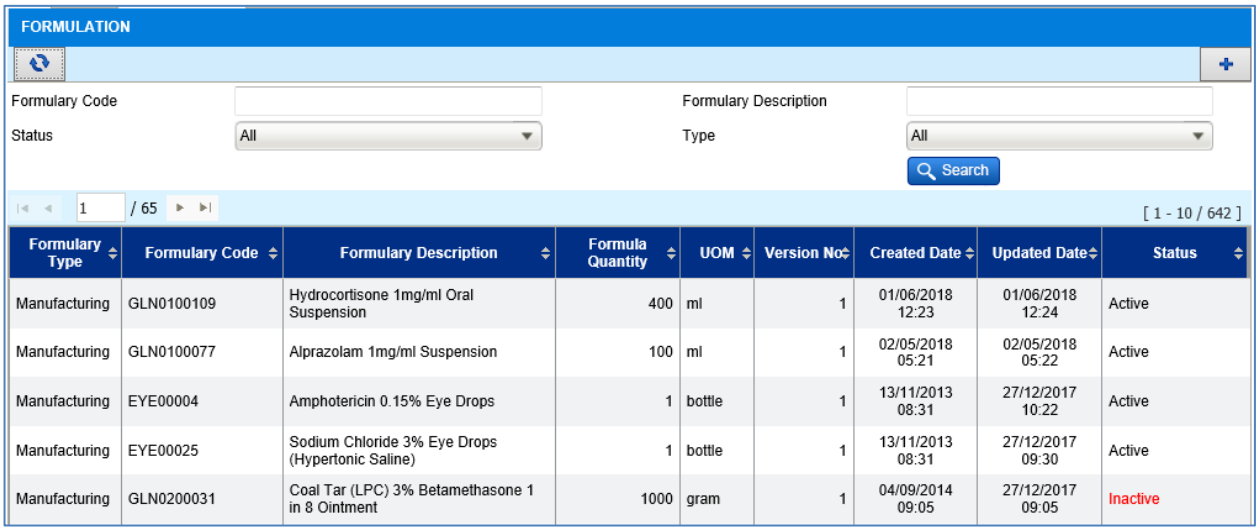
3.2.3.2 Detail Functionality and Screen

3.2.3.2.1 *Formulation Listing*

3.2.3.2.1.1 ***Screen Design***

ID	FOR.SD1
Description	To search existing formulation record

Diagram



Formulary Type	Formulary Code	Formulary Description	Formula Quantity	UOM	Version No	Created Date	Updated Date	Status
Manufacturing	GLN0100109	Hydrocortisone 1mg/ml Oral Suspension	400	ml	1	01/06/2018 12:23	01/06/2018 12:24	Active
Manufacturing	GLN0100077	Alprazolam 1mg/ml Suspension	100	ml	1	02/05/2018 05:21	02/05/2018 05:22	Active
Manufacturing	EYE00004	Amphotericin 0.15% Eye Drops	1	bottle	1	13/11/2013 08:31	27/12/2017 10:22	Active
Manufacturing	EYE00025	Sodium Chloride 3% Eye Drops (Hypertonic Saline)	1	bottle	1	13/11/2013 08:31	27/12/2017 09:30	Active
Manufacturing	GLN0200031	Coal Tar (LPC) 3% Betamethasone 1 in 8 Ointment	1000	gram	1	04/09/2014 09:05	27/12/2017 09:05	Inactive

Notes	• Click on ‘Search’ button to search for the existing formulation record. • Click on ‘Add’ button to add new record.
Cross References	None

3.2.3.2.1.2 ***Application Business Rules***

No.	Name	Description
1.	Search Transaction	Click on the ‘Search’ button to search the existing record: i. If user enters multiple search criteria, system will display the search results based on the specified criteria ii. If no criteria entered, system will display all transactions iii. System will display the records that match any keyword entered regardless of the letter type (uppercase or lowercase).

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No.	Name	Description
2.	View search result in listing page	Columns in search result listing are displayed based on: i. Formulary Type: Display 'Type' value based on transaction. ii. Formulary Code: Display 'Drug Code' value based on transaction. iii. Formulary Description: Display 'Drug Name' value based on transaction. iv. Formula Quantity: Display 'Quantity' value based on transaction. v. UOM: Display 'UOM' value based on transaction. vi. Version No: Display 'Formulation Version' value based on transaction. vii. Created Date: Display 'Date Created' value based on transaction. viii. Updated Date: Display 'Approved Date' value based on transaction. ix. Status: Display 'Status' value based on transaction.
3.	Formulation Transaction	Double click on any record to view the record details.
4.	Create New Transaction	Click on the 'Create New Record (+)' button to create new transaction record.
5.	Refresh Listing	Click on the 'Refresh' button to reset all search criteria: i. Formulary Code – Display as empty field ii. Formulary Description – Display as empty field iii. Status – All iv. Type – All Search results will display all records based on above reset search criteria.
6.	User access	All user is allowed to view/create/edit/approve record however limited to the given user access role.

3.2.3.2.1.3 ***Input Validation Rules***

No.	Name	Description	Mandatory	Format
1.	Formulary Code	User to enter Formulary Code (Drug Code). Search result will list all transaction based on the matching Formulary Code.	No	Text box
2.	Formulary Description	User to enter Formulary Description (Drug Name). Search result will list all transaction based on the matching Formulary Description.	No	Text box
3.	Status	Default to 'All' however user can select specific status: • Active	No	Drop down list

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No.	Name	Description	Mandatory	Format
		• Inactive • New • Pending Approval • Reject – On Hold Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_STATUS'.		
4.	Type	Default to 'All' however user can select specific status: • Manufacturing • Repacking Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_TYPE'.	No	Drop down list

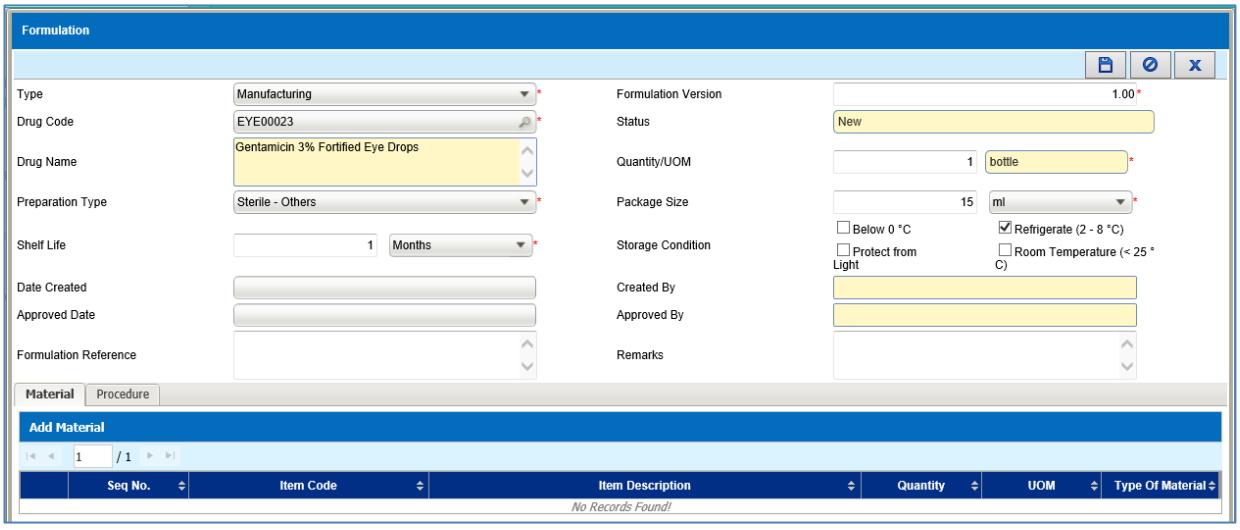
3.2.3.2.2 *New Formulation Record*

3.2.3.2.2.1 ***Screen Design***

ID	FOR.SD2
Description	To create new formulation record.

Diagram

i. Add new Formulation record



ii. Add Material

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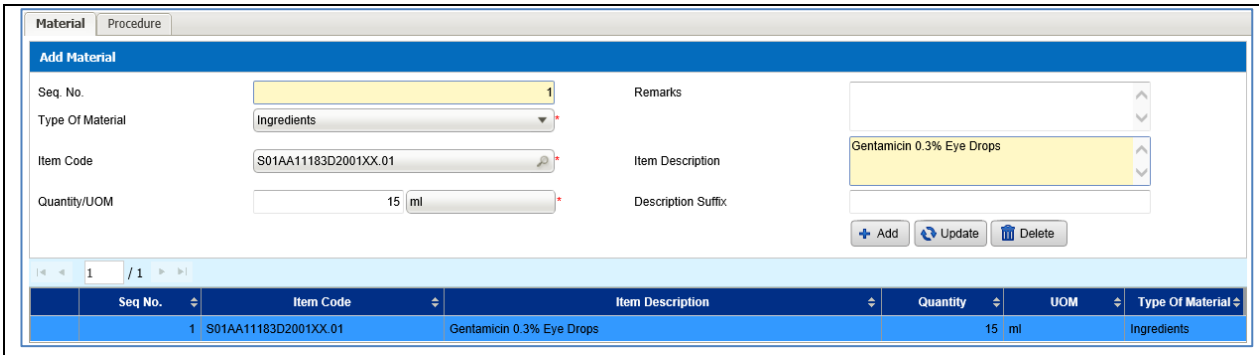
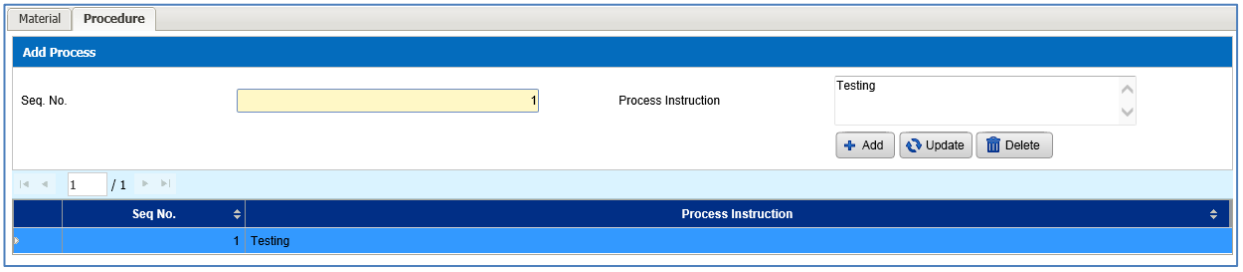
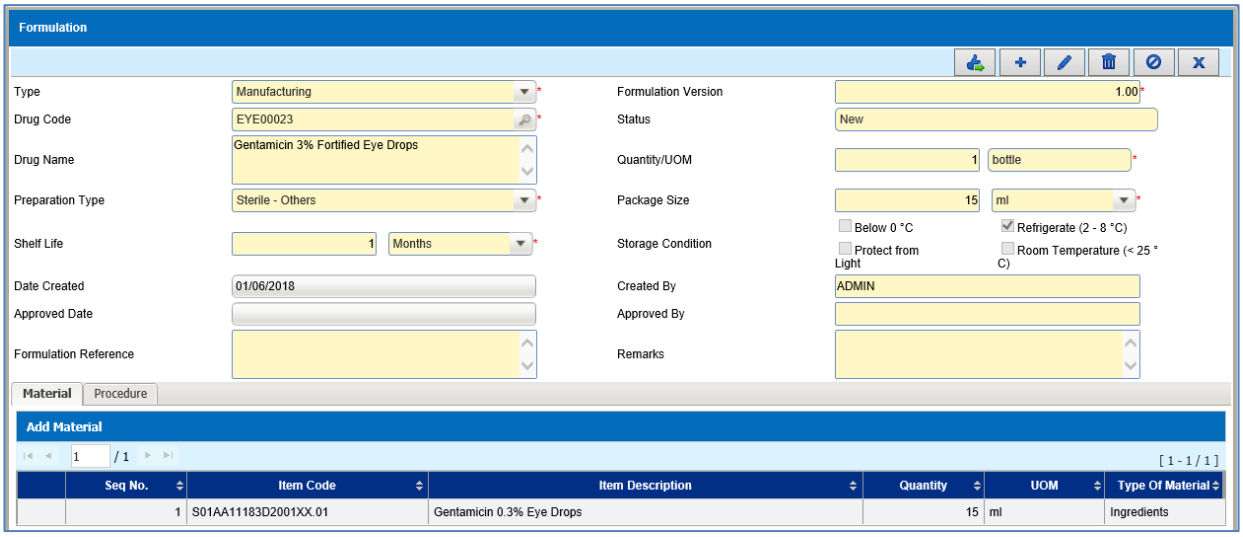


iii. Add Procedure



iv. Save record



v. Edit record (After save, before send for approval)

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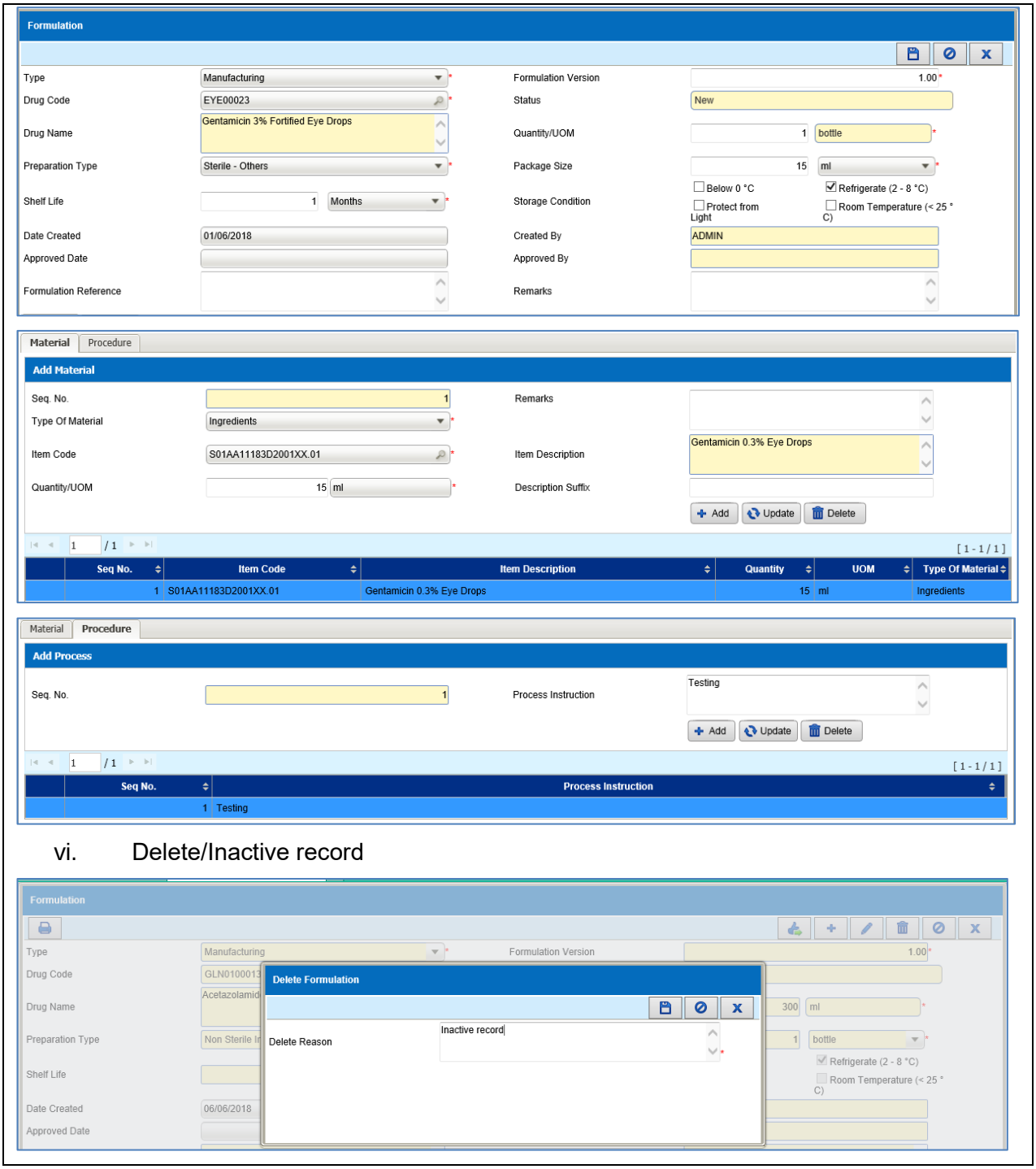

vi. Delete/Inactive record

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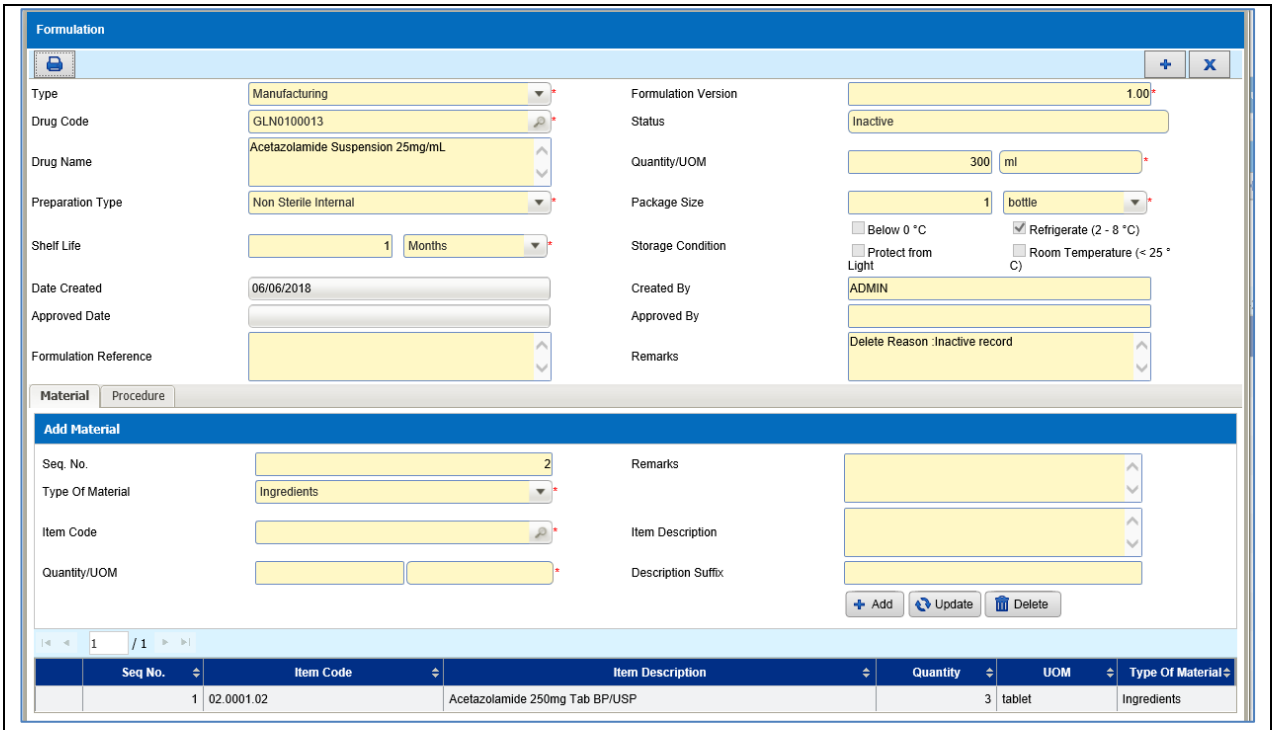
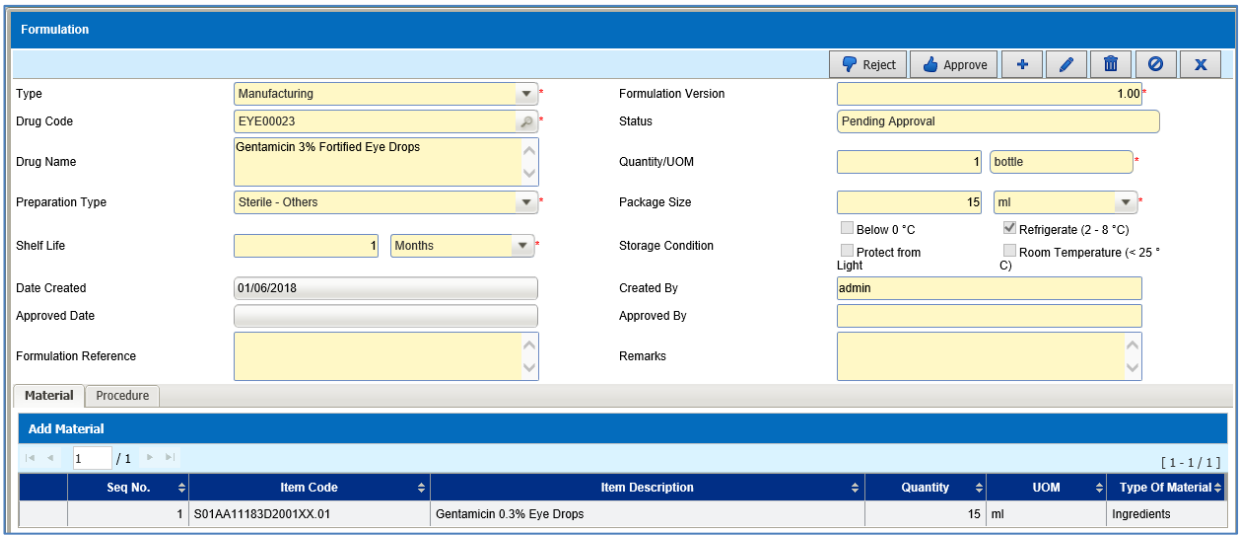


vii. Send for Approval



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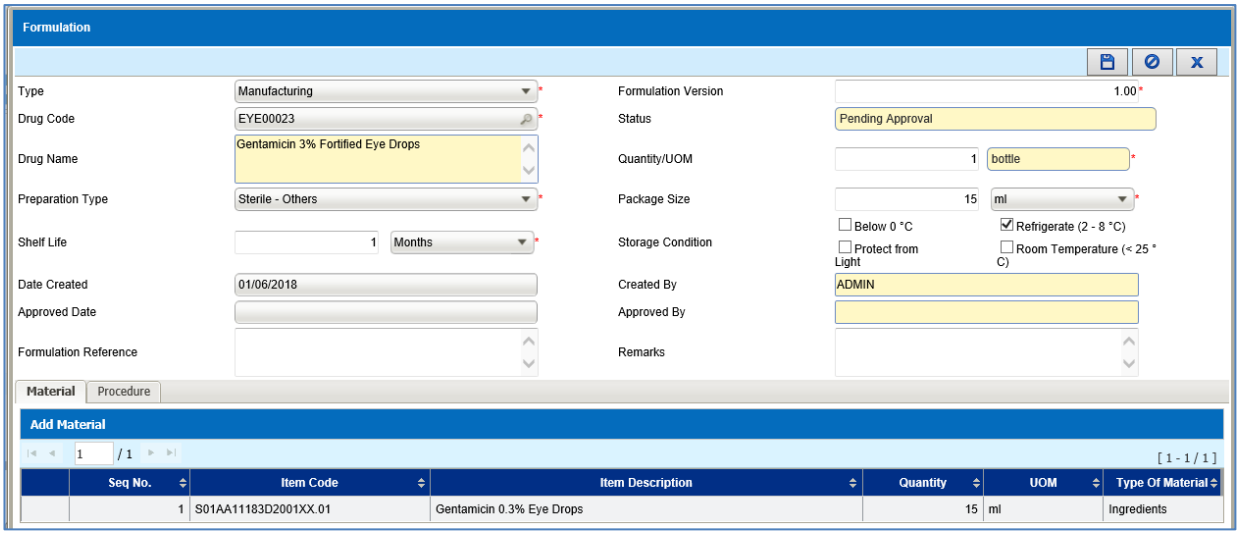
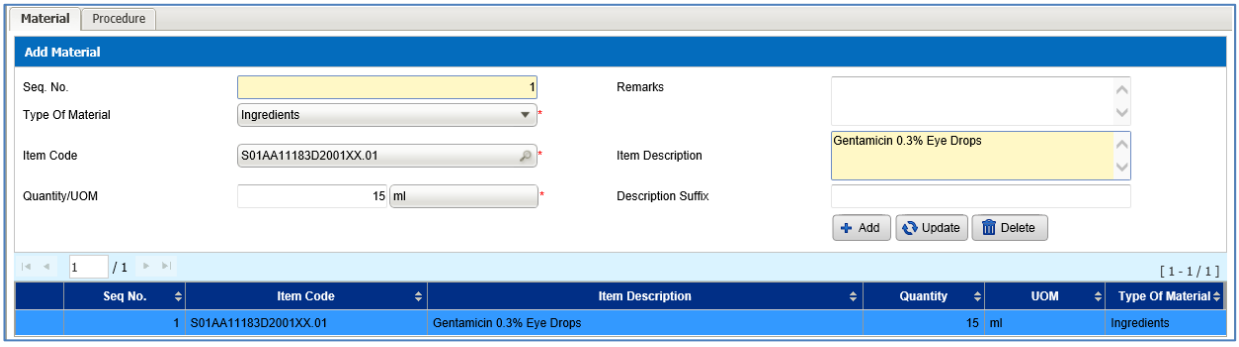
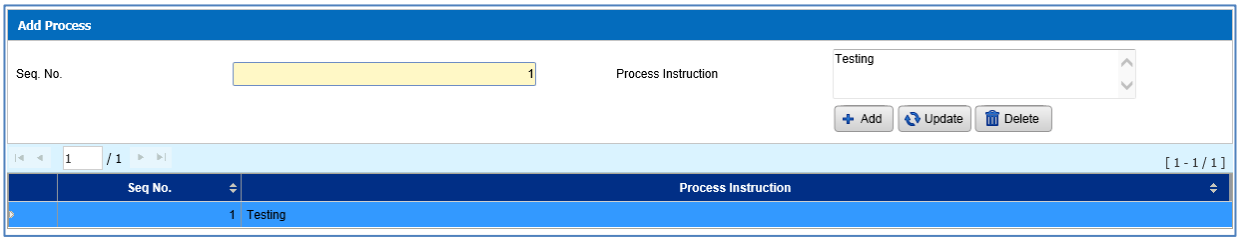
viii. Edit record (After send for approval, before approve/reject)







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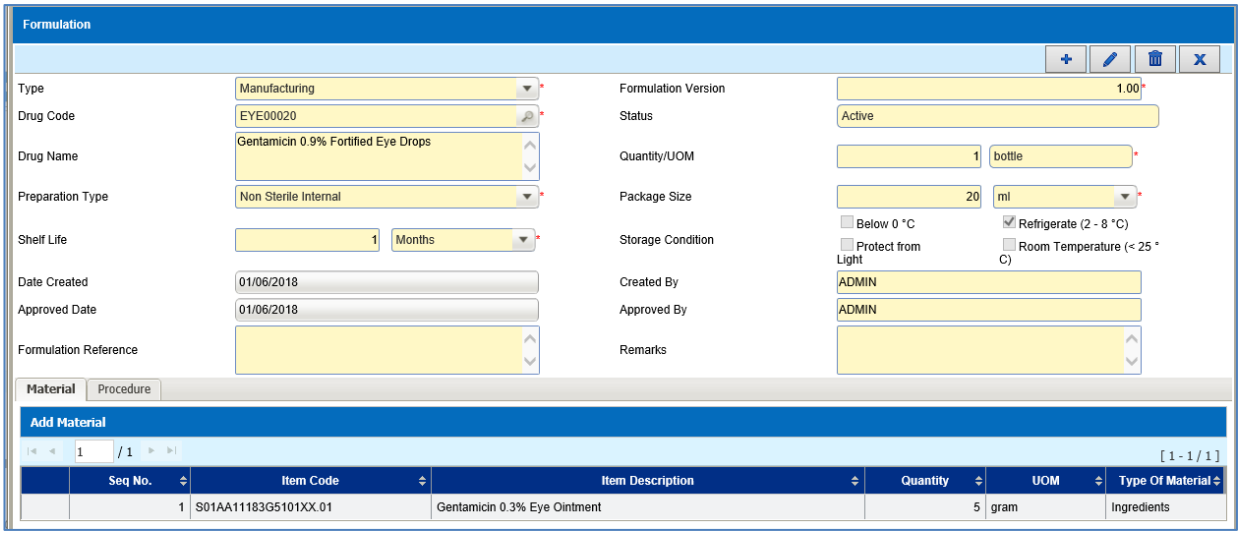
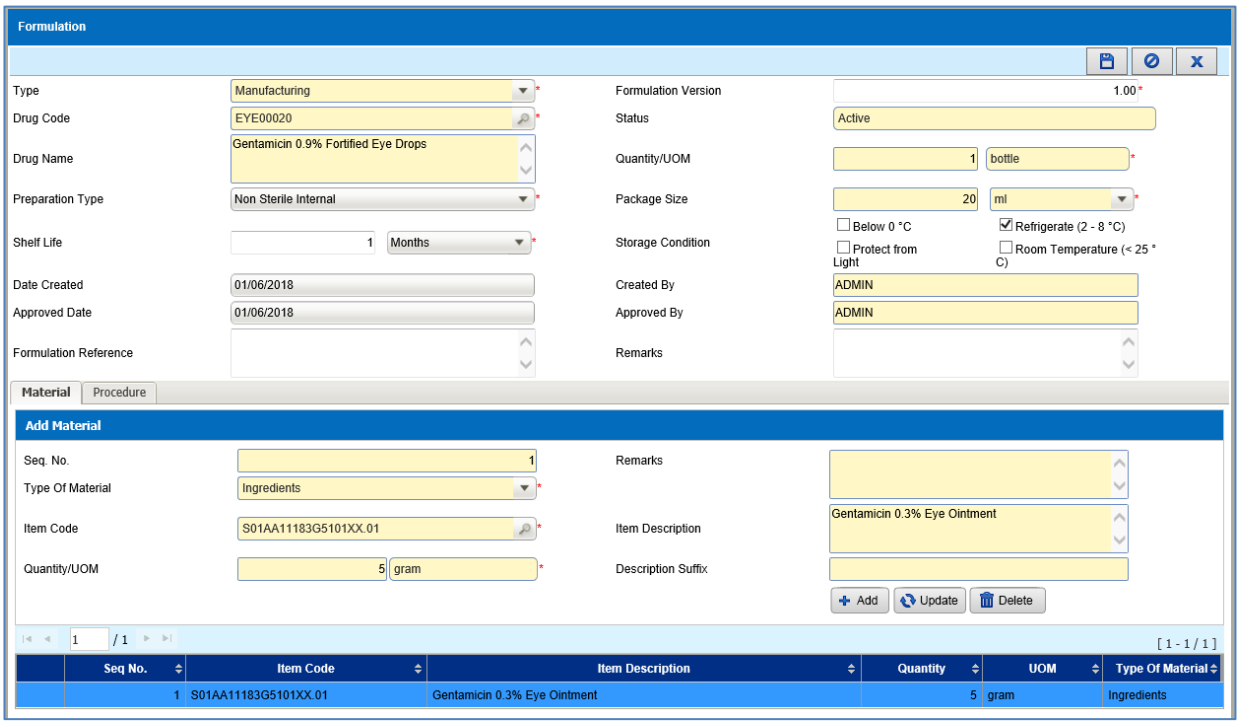
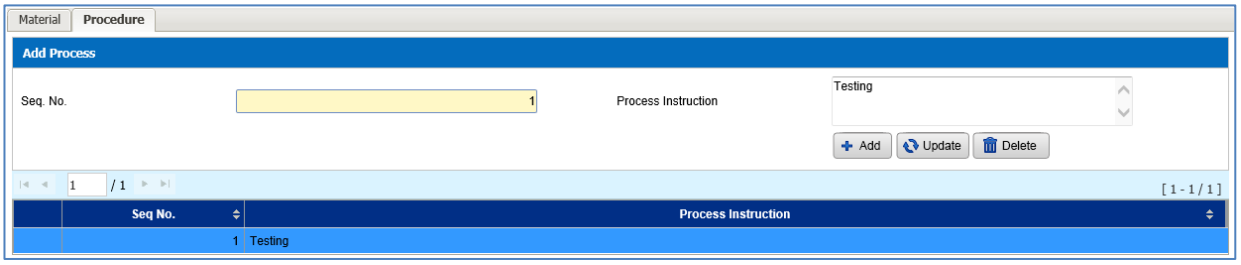
ix. Approve



x. Edit record (After approve record)





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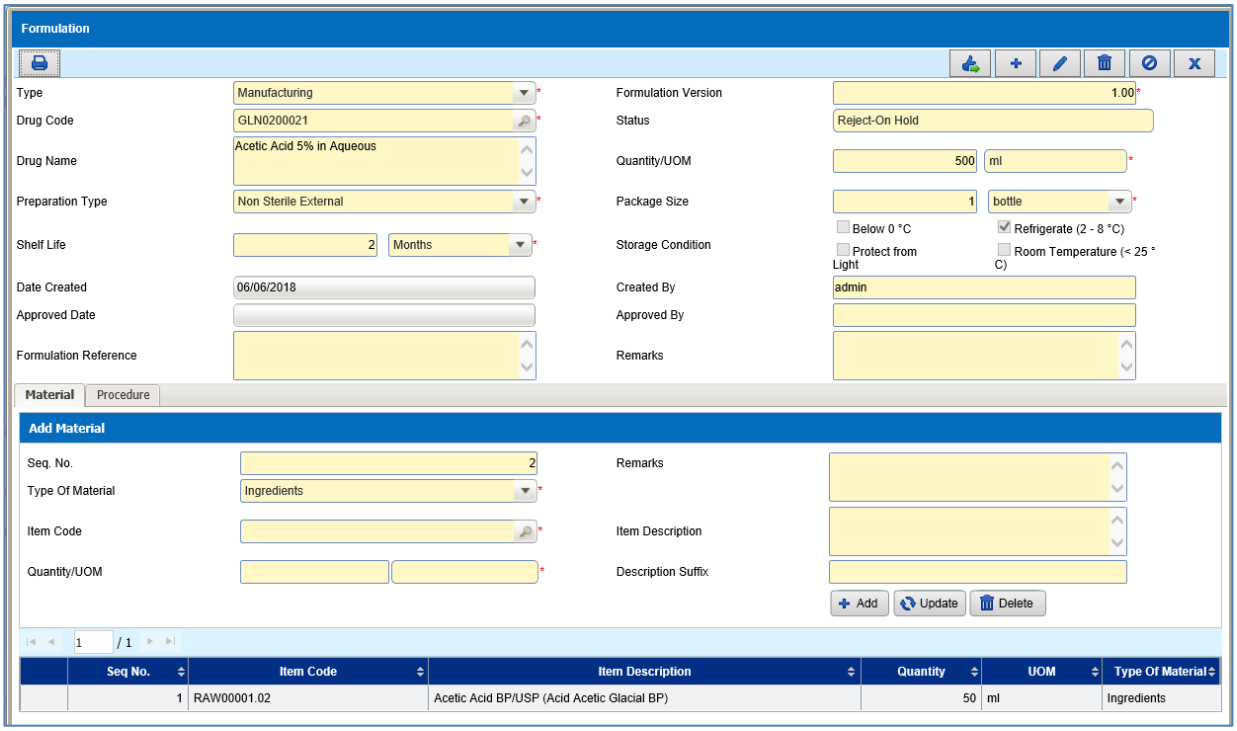
xi. Reject



Notes	• Click on ‘Save’ button to save new formulation record. • Click on ‘Cancel’ button to reset the newly entered record. • Click on ‘Add’ button in Material and Procedures section to add new Material or Procedures. • Click on ‘Update’ button in Material and Procedures section to update existing record. • Click on ‘Delete’ button in Material and Procedures section to delete existing record. • Click on ‘Send for Approval’ button to send record for approval. • Click on ‘Add’ button to add new record. • Click on ‘Edit’ button to edit the record. • Click on ‘Delete’ button to update the record status to Inactive. • Click on ‘Approve’ button to approve record. • Click on ‘Reject’ button to reject record.
Cross References	

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3.2.3.2.2.2 ***Application Business Rules***

No.	Name	Description
1.	New Formulation record	Create new formulation record: i. User to fill in all required details. ii. Record status displayed as 'New' by default. iii. Able to add material details and procedures. iv. Mandatory to add material before save record. v. Not mandatory to add procedures before save record.
2.	Save record	On click of Save button: i. Record status remains as 'New'. ii. All fields are editable and able to add/update/delete materials or procedures. iii. Button 'Send for Approval' is displayed. iv. Button 'Delete/Inactive record' is displayed. v. Button 'Edit' is displayed, on click of 'Edit' button, screen is editable. vi. Button 'Add' is displayed, on click of 'Add' button, screen will clear and able to create new record.
3.	Delete/Inactive record	User able to delete/inactive record once already saved record and at all stage until record is approved. On delete record, mandatory to fill in 'Delete Reason' and status will update to 'Inactive'. On save 'Delete Reason', value will be displayed in the 'Remarks' field and all fields will display as read-only.
4.	Send for Approval	On click of 'Send for Approval' button: i. Record status updated to 'Pending Approval'. ii. All fields are editable. vii. Button 'Approve' is displayed. viii. Button 'Reject' is displayed. ix. Button 'Delete/Inactive record' is displayed. x. Button 'Edit' will display, on click of 'Edit' button, screen is editable. xi. Button 'Add' is displayed, on click of 'Add' button, screen will clear and able to create new record.
5.	Approve record	On click of 'Approve' button: i. Record status updated to 'Active'. ii. On click of 'Edit' button, able to edit: • Formulation Version • Preparation Type • Shelf Life • Storage Condition • Formulation Reference • Remarks • Procedures iii. Button 'Delete/Inactive record' is displayed.

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No.	Name	Description
6.	Reject record	On click of 'Reject' button: i. Record status updated to 'Reject-On Hold'. ii. User able to edit all fields and resend for approval. iii. Button 'Send for Approval' is displayed. iv. Button 'Delete/Inactive record' is displayed. v. Button 'Edit' is displayed, on click of 'Edit' button, screen is editable. vi. Button 'Add' is displayed, on click of 'Add' button, screen will clear and able to create new record.
7.	User access	All user is allowed to view/create/edit/approve record however limited to the given user access role.

3.2.3.2.2.3 ***Input Validation Rules***

No.	Name	Description	Mandatory	Format
1.	Type	Able to select options as below: • Manufacturing • Repacking Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_TYPE'. Selecting this value will only categorized the record into Manufacturing or Repacking record, no other function involved. Manufacturing is for records that manufacture new product and new item code, while Repacking is for records that only repack the item into new packaging but still requires new item code.	Yes	Drop down list
2.	Formulation Version	User to enter numeric value with maximum 2 integers with 2 decimals. Formulation version is entered for each formulation as multiple formulations are allowed for one item code. The entered version will be used to differentiate each formulation for the same item.	Yes	Text field
3.	Drug Code	Field will list all active Drug Code as per in Maintenance > Pharmacy > Drug screen. User able to search and select the drug code based on the Drug Description or/and Drug Code.	Yes	Searching field

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No.	Name	Description	Mandatory	Format
4.	Status	Record status according to action done by user: • Save – Status updated as 'New' • Send for Approval – Status updated as 'Pending Approval' • Delete record – Status updated as 'Inactive' • Approve – Status updated as 'Active' • Reject – Status updated as 'Reject-On Hold' Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_STATUS'.	No	Read-only
5.	Drug Name	Displayed based on the selected Drug Code.	No	Read-only
6.	Quantity/UOM	User to enter the formulation quantity. Numeric value with maximum 9 characters including 2 decimals. UOM field will display the selected drug SKU UOM as per in Maintenance > Pharmacy > Drug screen.	Yes	Text field
7.	Preparation Type	Able to select options as below: • Non Sterile External • Non Sterile Internal • Sterile – CDR • Sterile – IV • Sterile – Others • Sterile – PN Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_PREP_TYPE'.	Yes	Drop down list
8.	Package Size	User to enter the pack size. Numeric value with maximum 9 characters including 2 decimals. UOM drop down list will display all active records from UOM maintenance screen.	Yes	Text field
9.	Shelf Life	User to enter the shelf life. Integer value only with maximum 9 characters. For UOM drop down list, able to select options as below: • Days • Months • Weeks Values are displayed from Reference Codes maintenance screen with domain = 'DURATION'.	Yes	Text field

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No.	Name	Description	Mandatory	Format
10.	Storage Condition	Value displayed in checkboxes, able to select options as below: ▪ Below 0 °C ▪ Protect from Light ▪ Refrigerate (2 - 8 °C) ▪ Room Temperature (< 25 °C) Values are displayed from Reference Codes maintenance screen with domain = 'STORAGE_CONDITION'.	No	Checkbox
11.	Date Created	Displayed based on the record created date. Format: dd/mm/yyyy	No	Text field
12.	Created By	User who created/saved the record. Displayed based on user's first name and last name from Maintenance>HQ Security>User Profile.	No	Text field
13.	Approved Date	Displayed based on the record approved date. Format: dd/mm/yyyy	No	Text field
14.	Approved By	User who approve the record. Displayed based on user's first name and last name from Maintenance>Security>User Profile.	No	Text field
15.	Formulation Reference	User to enter free text value with maximum 300 characters.	No	Text field
16.	Remarks	User to enter free text value with maximum 100 characters.	No	Text field
Add Material				
17.	Seq. No	Display the record sequence number. Field is auto-populated by system and is read only.	No	Read-only
18.	Type of Material	Able to select options as below: ▪ Consumable ▪ Ingredients Values are displayed from Reference Codes maintenance screen with domain = 'MATERIAL_TYPE'.	Yes	Drop down list
19.	Remarks	User to enter free text value with maximum 100 characters.	No	Text field
20.	Item Code	Field will list all active Item Code as per in Maintenance > Inventory > Item Master screen. User able to search and select the item code based on the Item Description or/and Item Code.	Yes	Searching field
21.	Item Description	Displayed based on the selected Item Code.	No	Read-only

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No.	Name	Description	Mandatory	Format
22.	Quantity/UOM	User to enter the formulation quantity. Numeric value with maximum 9 characters including 2 decimals. UOM field will display the selected drug SKU UOM as per in Maintenance > Pharmacy > Drug screen.	Yes	Text field
23.	Description Suffix	User to enter free text value with maximum 50 characters. Field value will be used as additional description for material item, For example: Description suffix: q.s Drug Name: Syrup BP / Simple Syrup Material Description will be displayed as, Syrup BP / Simple Syrup (q.s)	No	Text field
Add Procedures				
24.	Seq. No	Display the record sequence number. Field is auto-populated by system and is read only.	No	Read-only
25.	Process Instruction	User to enter free text value with maximum 100 characters.	No	Text field

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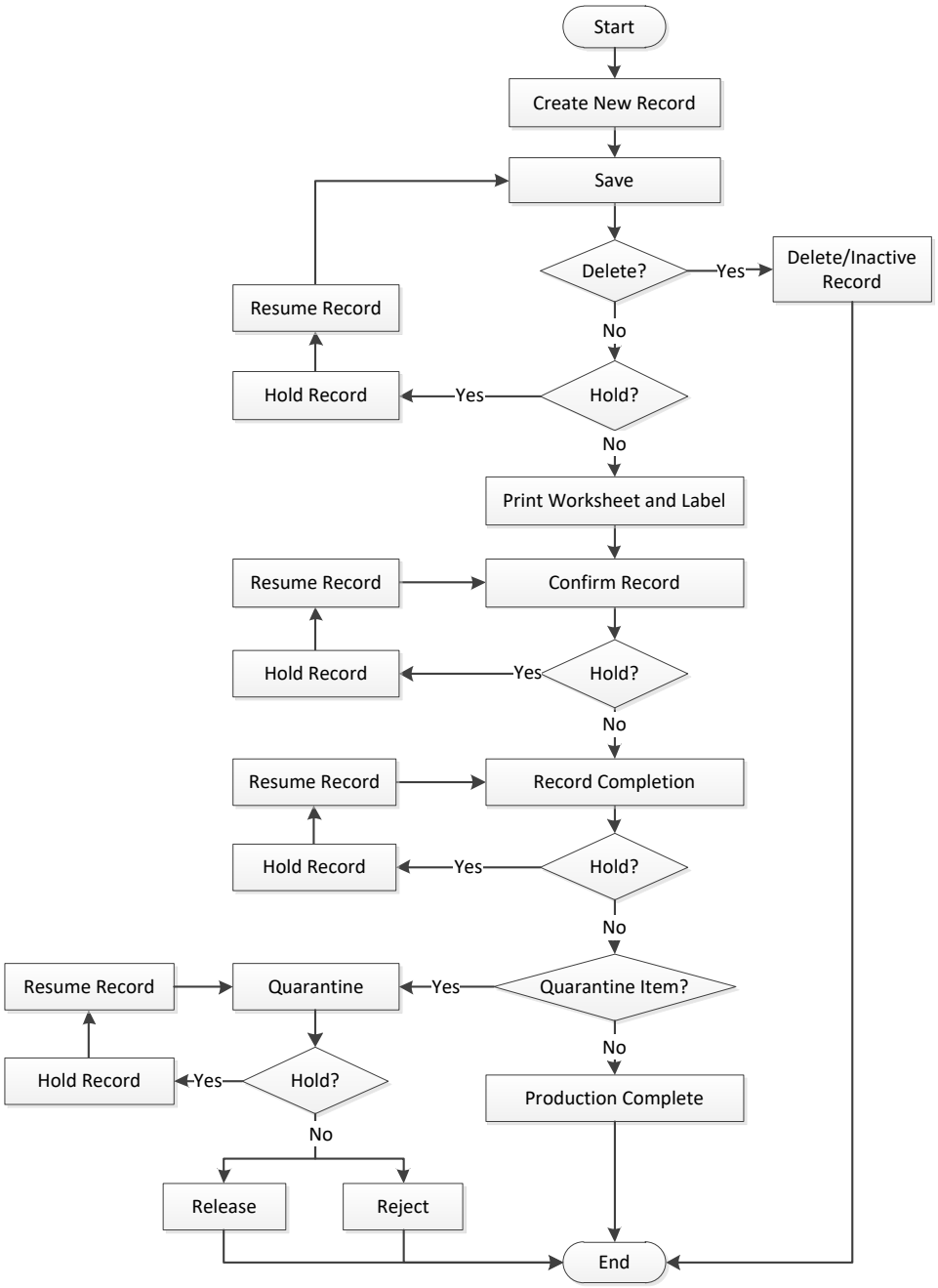
3.2.4 Work Order

Work order screen is for facility users to create record for production of new item based on the formulation received by HQ and able to print label and worksheet. Once production complete, raw materials stock will be deducted and final product stock quantity will increase in user's current login unit. The final product stock quantity will then able to be allocated in other dispensing modules for dispensing to patients.

3.2.4.1 Screen Navigation Diagram



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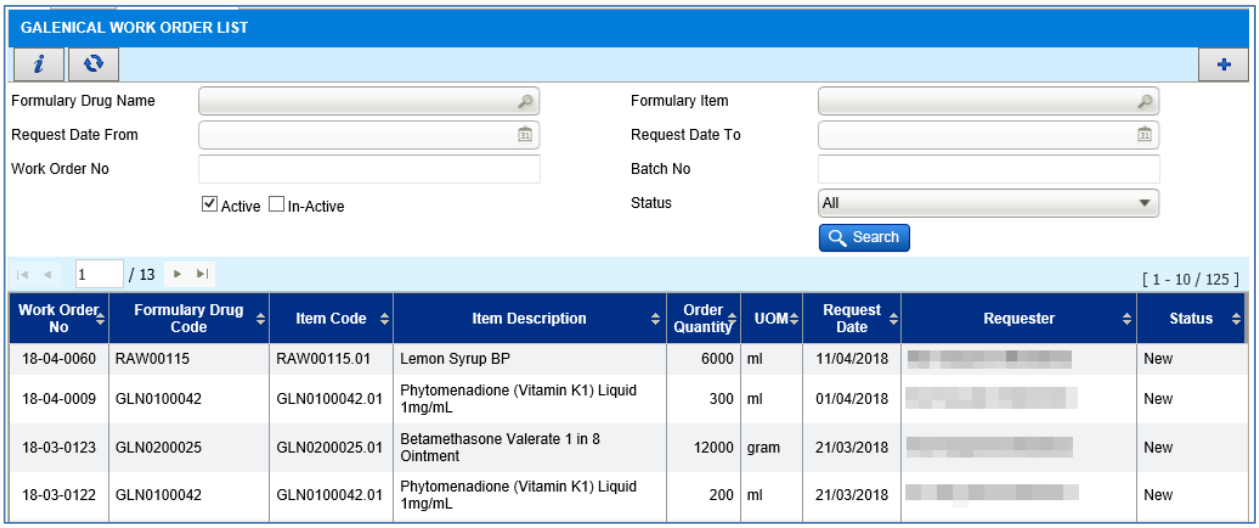
3.2.4.2 Detail Functionality and Screen

3.2.4.2.1 *Work Order Listing*

3.2.4.2.1.1 ***Screen Design***

ID	WO.SD1
Description	To search existing work order record
Diagram	
Notes	• Click on 'Search' button to search for the existing work order record. • Click on 'Add' button to add new record.
Cross References	None

3.2.4.2.1.2 ***Application Business Rules***

No.	Name	Description
1.	Search Transaction	Click on the 'Search' button to search the existing record: i. If user enters multiple search criteria, system will display the search results based on the specified criteria ii. If no criteria entered, system will display all transactions iii. System will display the records that match any keyword entered regardless of the letter type (uppercase or lowercase).
2.	View search result in listing page	Columns in search result listing are displayed based on: i. Work Order No: Display 'Work Order No' value based on transaction. ii. Formulary Drug Code: Display Drug Code based on the 'Formulary Drug Name' value in transaction.

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No.	Name	Description
		iii. Item Code: Display Item Code based on the 'Item Description' value in transaction. iv. Item Description: Display 'Item Description' value based on transaction. v. Order Quantity: Display 'Request Quantity' value based on transaction. vi. UOM: Display 'Request Quantity UOM' value based on transaction. vii. Request Date: Display 'Request Date' value based on transaction. viii. Requester: Display 'Worksheet Prepared By' value based on transaction. ix. Status: Display 'Request Status' value based on transaction.
3.	Work Order Transaction	Double click on any record to view the record details.
4.	Create New Transaction	Click on the 'Create New Record (+)' button to create new transaction record.
5.	Refresh Listing	Click on the 'Refresh' button to reset all search criteria: i. Formulary Drug Name – Display as empty field ii. Formulary Item – Display as empty field iii. Request Date From – Display as empty field iv. Request Date To – Display as empty field v. Work Order No – Display as empty field vi. Batch No – Display as empty field vii. Active/Inactive – Default to 'Active' viii. Status - All Search results will display all records based on above reset search criteria.
6.	User access	All user from all unit is allowed to view/create/confirm record however limited to the given user access role.

3.2.4.2.1.3 ***Input Validation Rules***

No.	Name	Description	Mandatory	Format
1.	Formulary Drug Name	To search record based on the Drug Code or Drug Name. Search result will list all transaction based on the matching Drug Code.	No	Searching field
2.	Formulary Item	To search record based on the Item Code or Item Description. Search result will list all transaction based on the matching Item Code.	No	Searching field
3.	Request Date	Able to enter or select applicable date. Searching will be	No	Calendar

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No.	Name	Description	Mandatory	Format
	From/To	based on the Request Date.		
4.	Work Order No	User to enter value. Search result will list all transaction based on the matching Work Order No.	No	Text box
5.	Batch No	User to enter value. Search result will list all transaction based on the matching Batch No.	No	Text box
6.	Active/Inactive	Default selection to 'Active'. Once 'Active' selected, search result will list all transaction with status: • New, Worksheet/Label Generated, On Hold, In Progress and Quarantine. Once 'Inactive' selected, search result will list all transaction with status: • Completed, Released, Rejected	No	Checkbox
7.	Status	Default to 'All' however user can select specific status: • Completed • In Progress • New • On Hold • Quarantine • Rejected • Released • Worksheet/Label Generated Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_WO_STATUS'.	No	Drop down list

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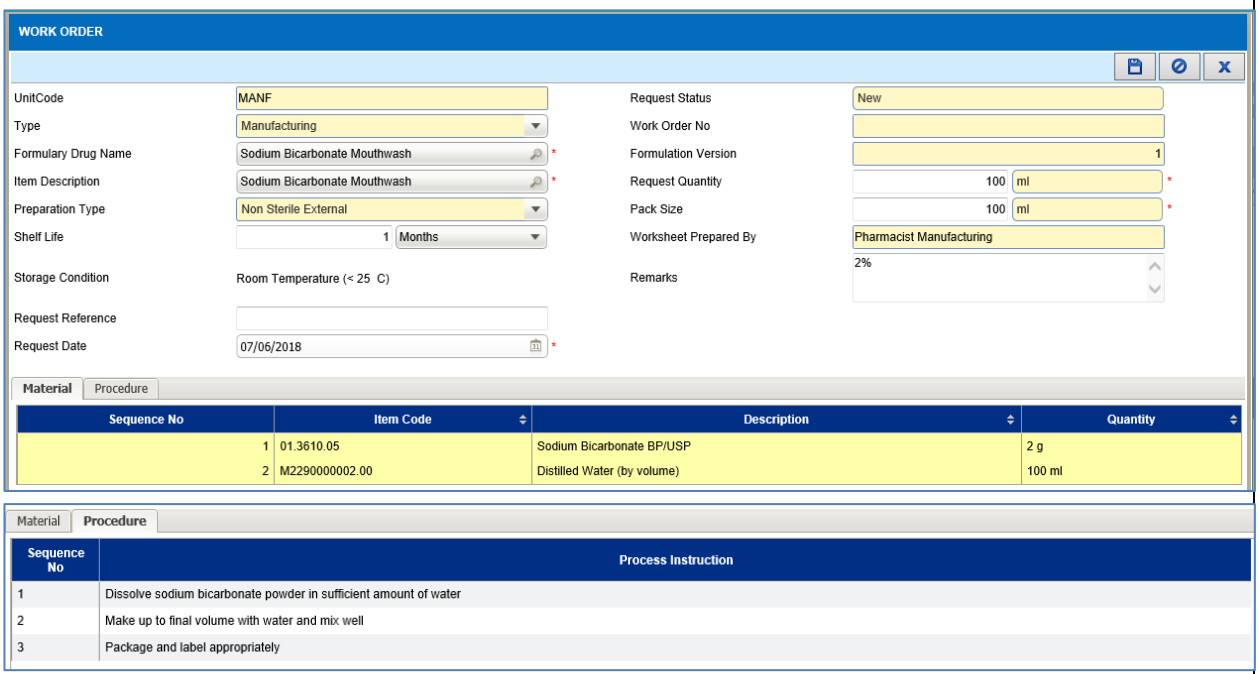
3.2.4.2.2 *New Work Order Record*

3.2.4.2.2.1 ***Screen Design***

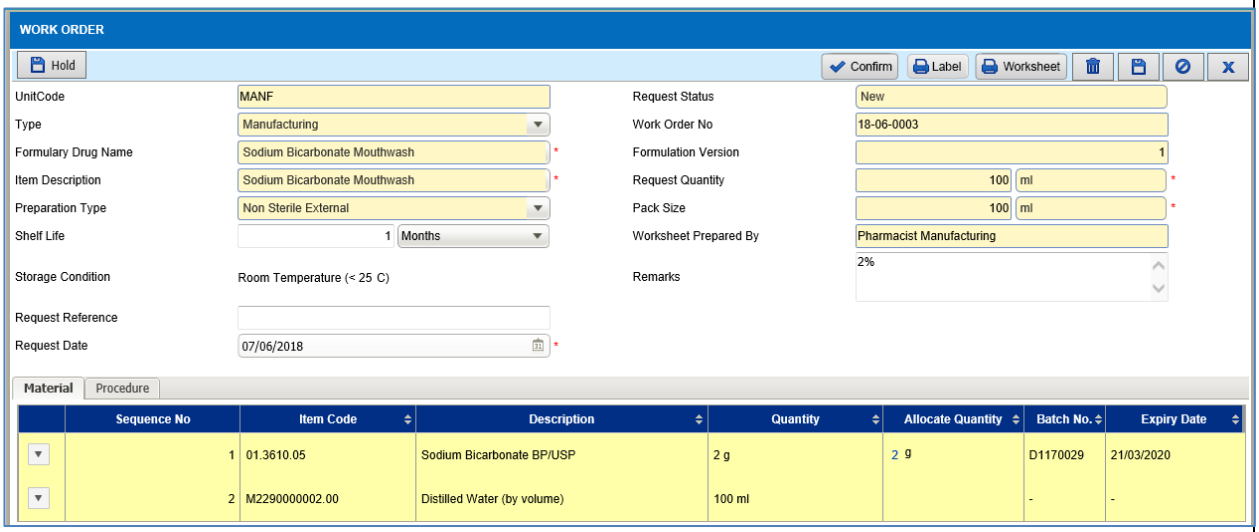
ID	WO.SD2
Description	To create new Work Order record.

Diagram

i. Add new record



ii. Save record



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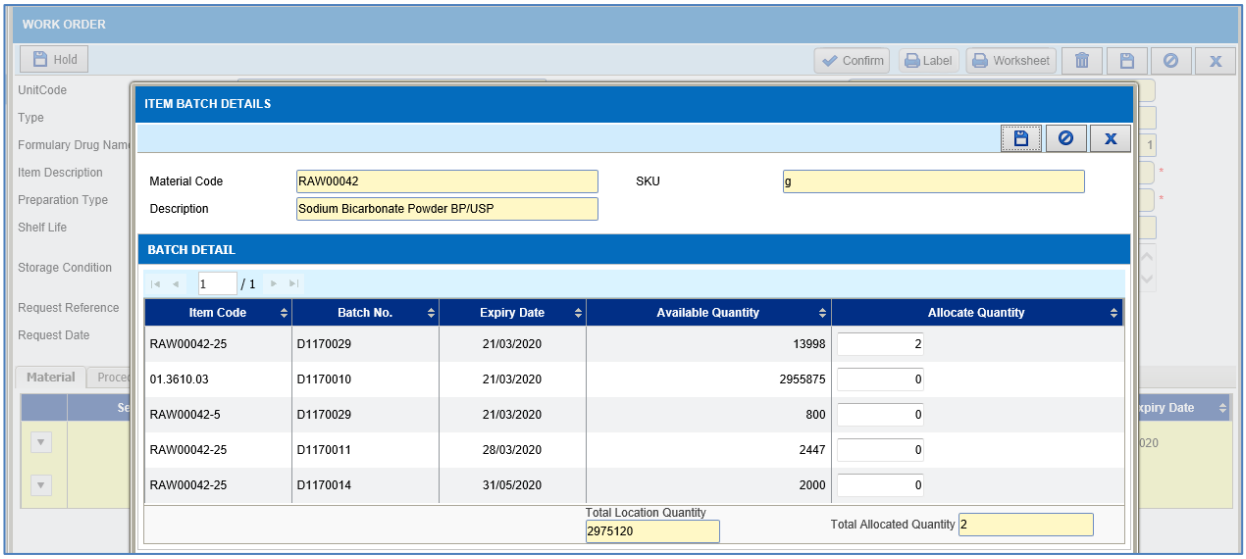
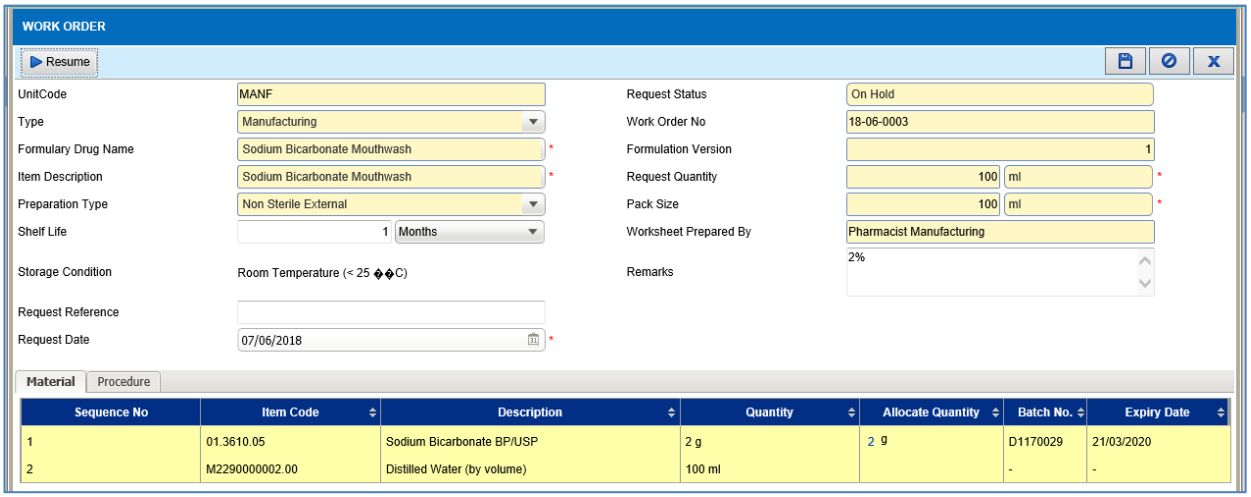
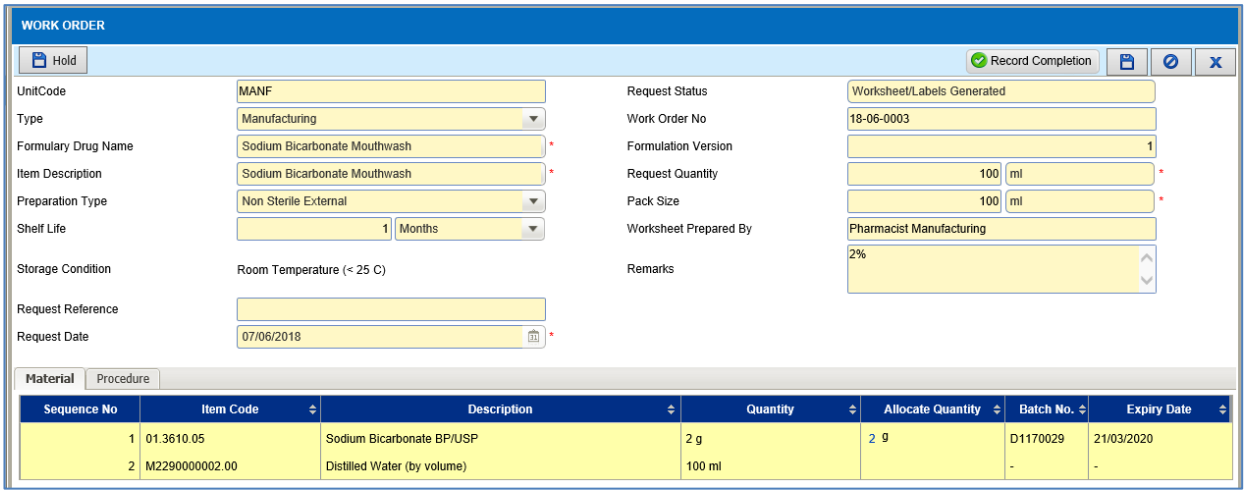
iii. View Item batch screen



iv. Hold record



v. Confirm record



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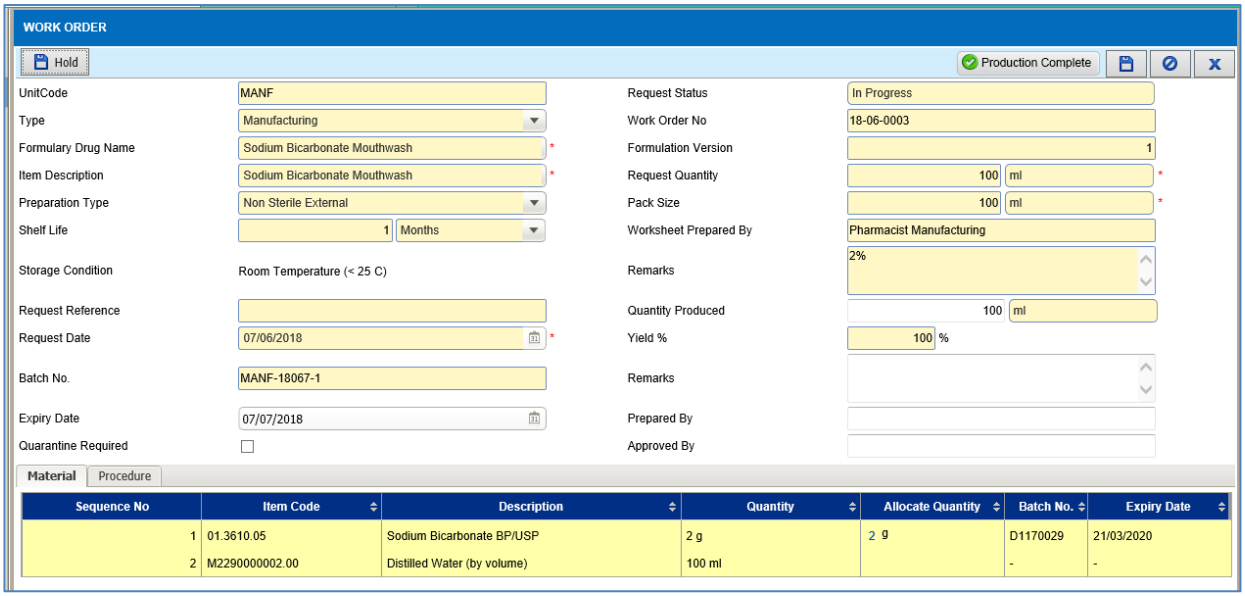
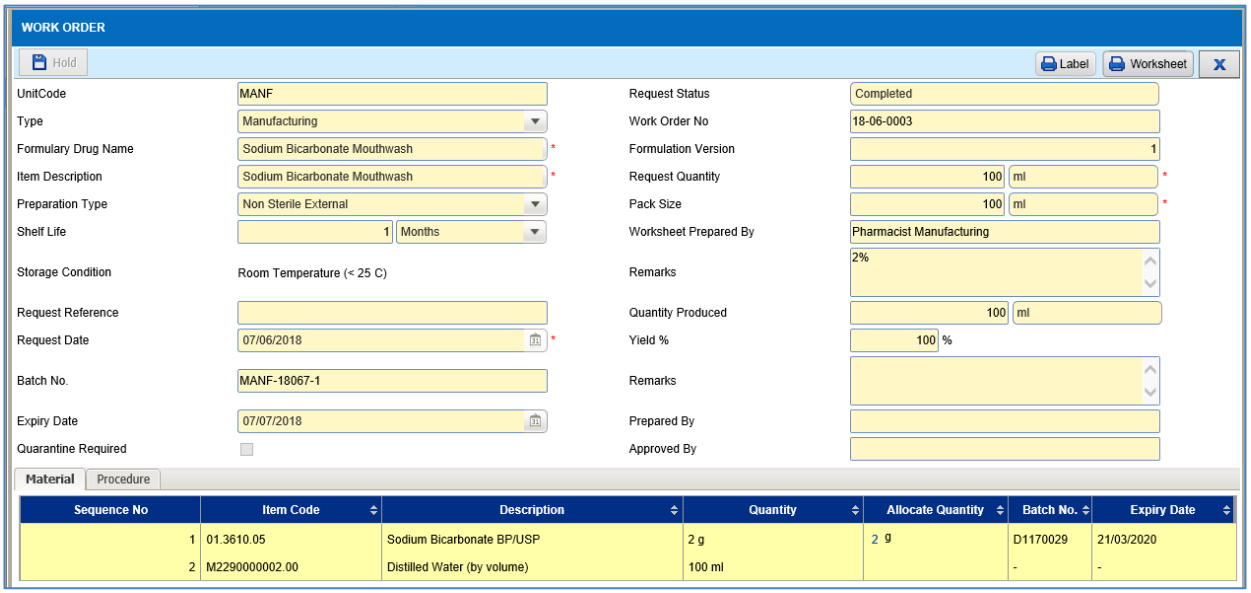
vi. Click Record Completion button



vii. Click Production Complete button



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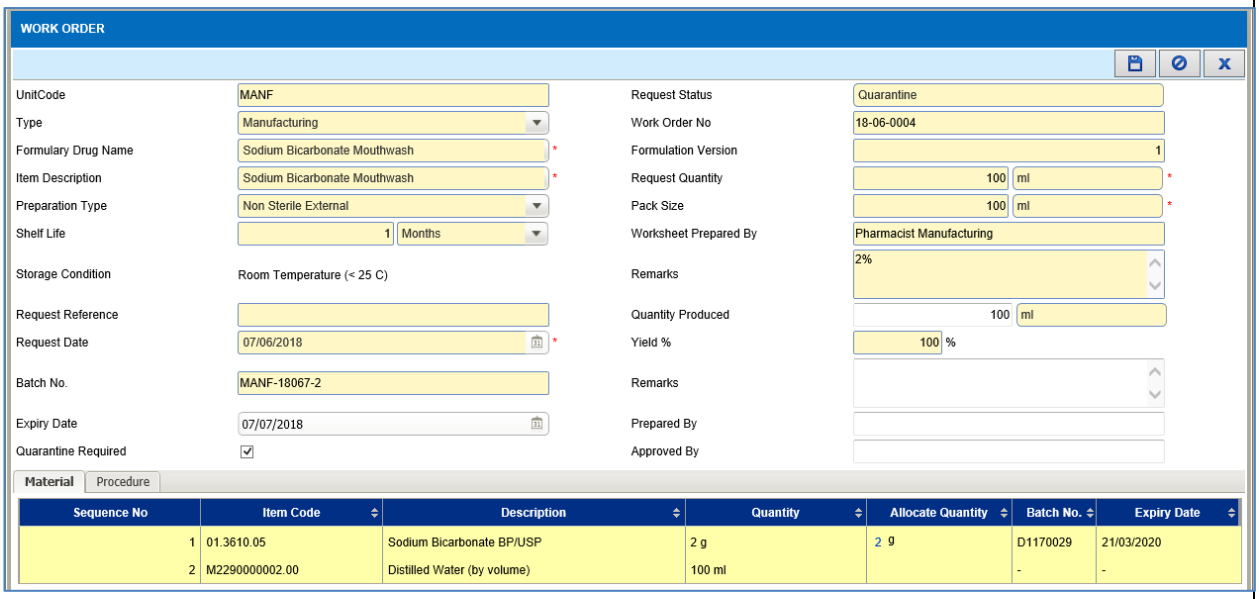
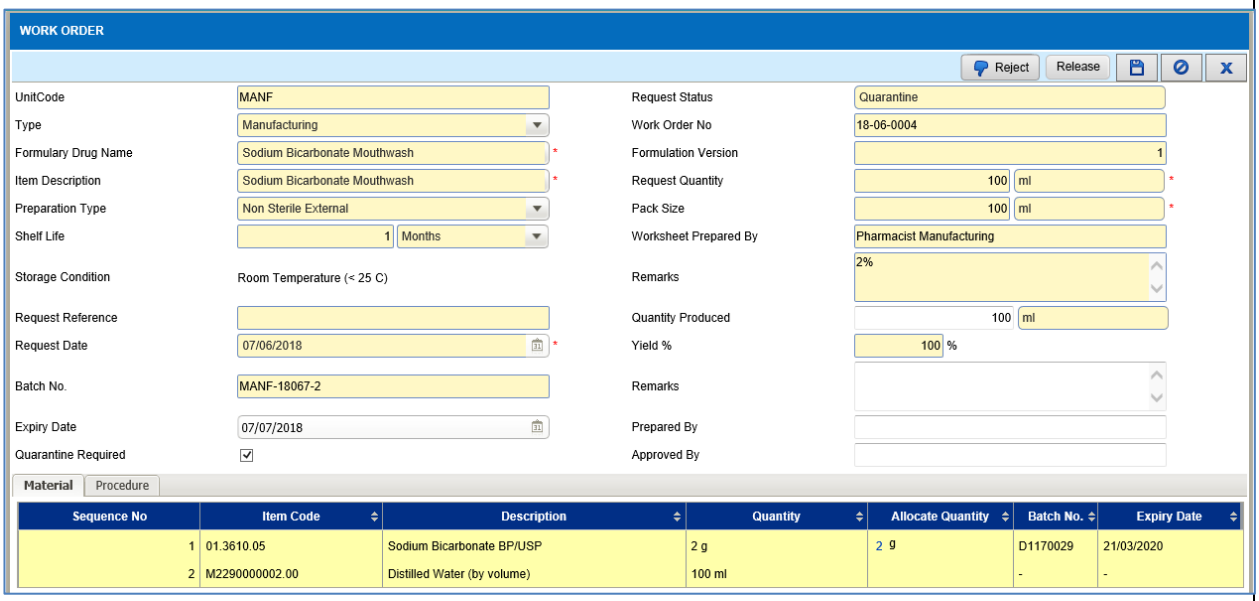
viii. Quarantine checkbox selected



ix. Save Quarantine record



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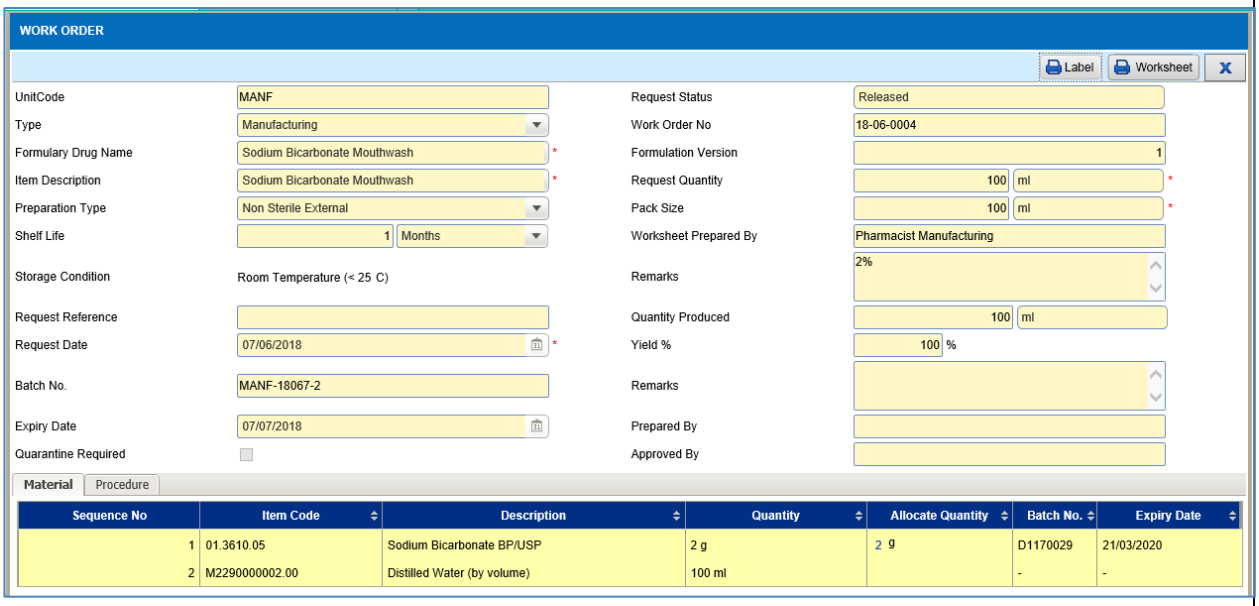
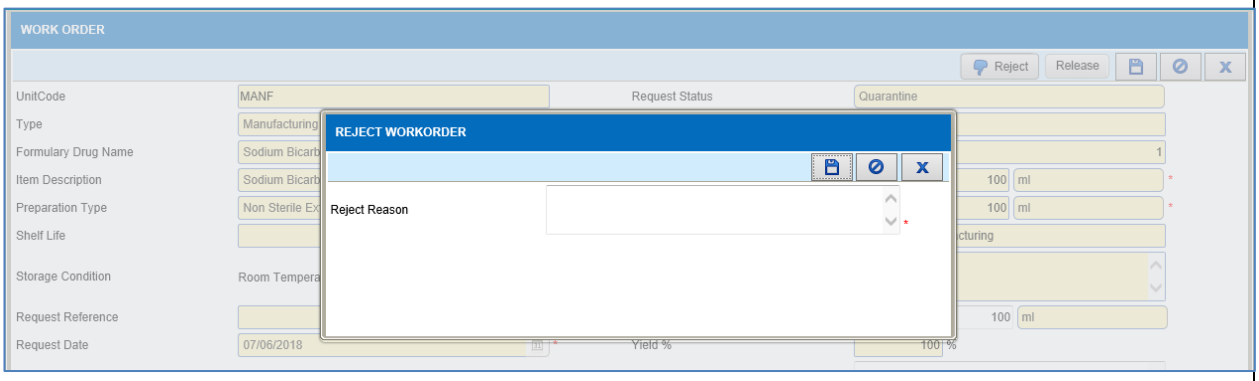
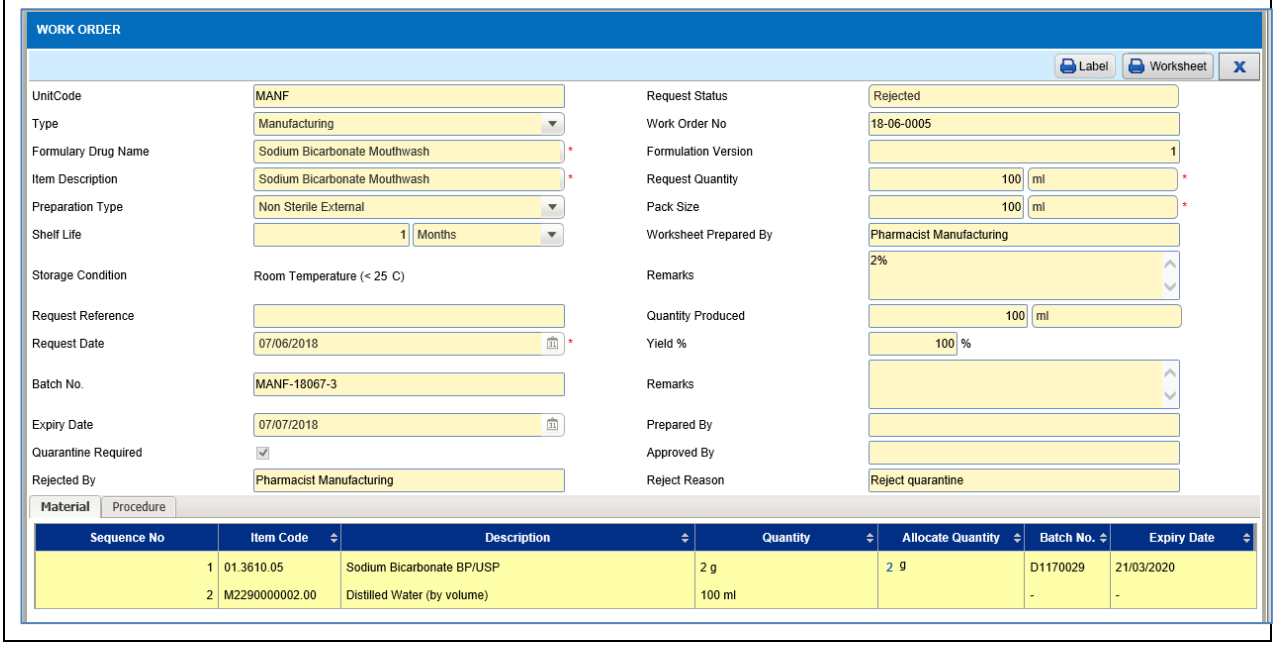
x. Release record



xi. If Reject record





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Notes	• Click on 'Save' button to save record. • Click on 'Cancel' button to reset the newly entered record. • Click on 'Delete' button delete record. • Click on 'Worksheet' button to print worksheet. • Click on 'Label' button to print label. • Click on 'Hold' button to hold record. • Click on 'Resume' button to resume record. • Click on 'Confirm' button to confirm record. • Click on 'Record Completion' button to update status to 'In Progress'. • Click on 'Production Complete' button to update status to 'Completed'. • Click on 'Release' button to release quarantine record. • Click on 'Reject' button to reject quarantine record.
Cross References	

3.2.4.2.2.2 ***Application Business Rules***

No.	Name	Description
1.	New Work Order record	Create new work order record: i. User to fill in all required details. ii. Record status displayed as 'New' by default. iii. Able to select 'Formulary Drug Name' and 'Item Description'. iv. Able to update 'Request Quantity' and 'Pack Size'. Once changed, material item quantity will recalculate.
2.	Save record	On click of Save button: i. Record status remains as 'New'. ii. Work order No will be auto-generated which is unique for each work order record. iii. Editable fields are: Shelf Life, Remarks, Request Reference, Request Date iv. System will auto allocate material item batch based on the stock available (minus allocated quantity) of all the items based on the material drug added in formulation. If no stock quantity available, system will not auto allocate, user to add stock then proceed with manual allocation. v. Auto allocation is only for Material Item where item group is Drug and Material Type is Ingredients in Formulation screen. No need to do allocation for Material Item where item group is Non Drug and Material Type is Consumable in Formulation screen. For non-drug item no need to update the stock, user will do own consumption in Inventory module to minus the non-drug stock from the unit location. vi. Button 'Confirm' is displayed. vii. Button 'Delete' is displayed.

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No.	Name	Description
		viii. Button 'Label' is displayed. ix. Button 'Worksheet' is displayed. x. Button 'Hold' is displayed.
3.	Delete record	Users able to delete record once already saved record and before confirm record. On click of Delete button, record is deleted from screen and database record status is updated to inactive.
4.	Print Worksheet	Click on 'Worksheet' button to view worksheet in PDF and print worksheet.
5.	Print Label	Click on 'Label' button to view label options, view label in PDF and print label.
6.	Hold record	'Hold' button is displayed at all screens with status except 'Completed', 'Released' and 'Rejected'. On click of 'Hold' button, record status will update to 'On Hold' and button 'Resume' will display. Click on the 'Resume' button and system will update the record status to previous status before hold.
7.	Confirm record	Click on 'Confirm' button: i. Record status will update to 'Worksheet/Labels Generated'. ii. All fields displayed as read-only. iii. Button 'Hold' is displayed. iv. Button 'Record Completion' button is displayed. v. Allocated batch quantity for raw material will be deducted from the stock available quantity.
8.	Record completion	On click of 'Record Completion' button: i. Record status updated to 'In Progress'. ii. Only fields below are editable: • Quantity Produced • Remarks • Expiry Date • Prepared By • Approved By • Quarantine Required iii. Button 'Save' is displayed. iv. Button 'Hold' is displayed. v. Button 'Production Complete' is displayed.
9.	Production Complete	On click of 'Production Complete' button: i. Record status updated to 'Completed'. ii. All fields will display as read-only. iii. Button 'Print Label' is displayed. iv. Button 'Print Worksheet' is displayed. Worksheet will be printed as a final worksheet, not draft as printed when Confirm record. v. Stock available quantity for the final product will increase based on the value specified in the 'Quantity Produced' field. vi. System should check whether the batch record already exists or not.

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No.	Name	Description
		If batch record already exists, system will update the available quantity, but if record is not exist, to create new stock in the current user's unit. vii. Same validation need to check for the Pharmacy Store. If record already exists in Pharmacy Store, no need to update but if record is not exist, need to create new stock with available quantity as 0. viii. Condition to create new stock, the item brand for the formulary item must contain MOH as one of the item brand.
10.	Quarantine	User is able to Quarantine record before Production Complete. On selection of the Quarantine checkbox, record status will update to 'Quarantine'. On save record, button 'Reject' and 'Release' are displayed.
11.	Release record	On click of 'Release' button, record status will update to 'Released' and stock available quantity for the final product will increase based on the value specified in the Quantity/UOM field.
12.	Reject record	On click of 'Reject' button, record status will update to 'Rejected', however no stock addition for the final product.
13.	User access	All user is allowed to view/create/edit/confirm/production complete record however limited to the given user access role.

3.2.4.2.2.3 *Input Validation Rules*

No.	Name	Description	Mandatory	Format
1.	Unit Code	Value displayed based on the user's requester unit code as setup in Maintenance > Security > User Profile screen.	No	Read-only
2.	Request Status	Record status according to action done by user: • Save – Status updated as 'New' • Confirm – Status updated as 'Worksheet/Labels Generated ' • Record Completion – Status updated as 'In Progress' • Production Complete – Status updated as 'Completed' • Release – Status updated as 'Released' • Reject – Status updated as 'Rejected' • Hold – Status updated as 'On Hold' Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_WO_STATUS'.	No	Read-only
3.	Type	This field will display record populated based on the selected formulation. Value displayed is either 'Manufacturing' or 'Repacking' based on the Reference	No	Read-only

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No.	Name	Description	Mandatory	Format
		Codes maintenance screen with domain = 'GALENICAL_TYPE'.		
4.	Work Order No	Value is auto-generated by system for each record after user saves the work order record based on the format as below: Current Year-Current Month-Running Number Example: 18-06-0001 The running number is up to 4 integer values and should reset monthly. Each month should generate the running number separately.	No	Read-only
5.	Formulary Drug Name	Field will list all active Formulation Drug Code as per in Formulation screen. Value is displayed based on the conditions below: i. Formulation drug record as retrieved from IWP where record status is 'Active'. ii. Drug is 'Active' in user's unit catalogue (Unit level 2 and 3 only) and 'Active' in Drug/Non-Drug Catalogue (All unit levels).	Yes	Searching field
6.	Formulation Version	Value is auto-populated based on the selected formulary drug code.	No	Read-only
7.	Item Description	Field will list all 'Active' item code based on the selected Formulary Drug Name where item is specified as 'Manufactured Item' in Maintenance > Inventory > Item Master screen.	Yes	Searching field
8.	Request Quantity	Value is default based on the selected formulation. User is allowed to edit the quantity. This request quantity value will be the default value for 'Produced Quantity' field (round up to next integer). This field is numeric only with up to 2 decimal values.	Yes	Text field
9.	Request Quantity UOM	Value is default based on the Quantity UOM of the selected formulation.	No	Read-only
10.	Preparation Type	Field will display value based on the selected formulation. Values displayed are: • Non Sterile External • Non Sterile Internal • Sterile – CDR • Sterile – IV • Sterile – Others • Sterile – PN Values are displayed from Reference Codes maintenance screen with domain = 'GALENICAL_PREP_TYPE'.	No	Read-only
11.	Pack Size	Value is default based on the selected formulation. User	Yes	Text field

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No.	Name	Description	Mandatory	Format
		is allowed to edit the pack size where value is referring to the final product packaging size. This field is numeric only with up to 2 decimal values.		
12.	Pack Size UOM	Value is default based on the Pack Size UOM of the selected formulation.	No	Read-only
13.	Shelf Life	Value is default based on the selected formulation. User is allowed to edit the default shelf life value. This field value will be used to generate the final product expiry date. This field is integer value only with maximum 9 characters.	Yes	Text field
14.	Shelf Life UOM	Display default value based on the selected formulation. User can edit the value. Able to select options as below: • Days • Months • Weeks Values are displayed from Reference Codes maintenance screen with domain = 'DURATION'.	No	Read-only
15.	Remarks	User to enter free text value with maximum 100 characters.	No	Text field
16.	Storage Condition	Display value based on the selected formulation where value is setup based on the Reference Codes maintenance screen where domain = 'STORAGE_CONDITION'. Values are: • Below 0 °C • Protect from Light • Refrigerate (2 - 8 °C) • Room Temperature (< 25 °C).	No	Read-only
17.	Request Reference	User to enter free text value with maximum 300 characters.	No	Text field
18.	Request Date	Displayed by default based on the record created date. Format: dd/mm/yyyy User able to edit the value.	Yes	Calendar
19.	Quantity Produced	Field is displayed when status = 'In Progress' only. Value is default based on the value entered in 'Request Quantity' field (round up to next integer for decimal value). User is allowed to edit the quantity. Value will impact	Yes	Text field
20.	Quantity Produced UOM	Field is displayed when status = 'In Progress' only. Displayed based on the selected drug SKU UOM as per in Maintenance > Pharmacy > Drug screen.	No	Read-only
21.	Yield %	Field is displayed when status = 'In Progress' only. Auto calculated value which shows the difference	No	Read-only

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No.	Name	Description	Mandatory	Format
		between the 'Request Quantity' and 'Quantity Produced' field values and is auto-calculated based on the calculation below: [(Quantity Produced – Request Quantity) / Quantity/UOM] * 100% Display negative value if got negative value.		
22.	Batch No.	Field is displayed when status = 'In Progress' only. Batch No is auto-generated by system based on the format as below: Unit Code-DDMMYY-Running number. Example: MANF-140618-1. • Unit Code is restricted up to 4 first characters only. • Date refers to 'Request Date' value. • Running number is auto reset by system scheduler on daily basis.	No	Read-only
23.	Expiry Date	Field is displayed when status = 'In Progress' only. By default value is generated based on the shelf life value but editable by user.	Yes	Calendar
24.	Quarantine Required	Field is displayed when status = 'In Progress' only. 'Quarantine Required' checkbox is to be selected if user need to quarantine the produced product. Selecting the Quarantine checkbox will update the record status to Quarantine.	No	Checkbox
25.	Prepared By	Field is displayed when status = 'In Progress' only. User name that prepare the record. User to enter free text value with maximum 300 characters.	No	Text field
26.	Approved By	Field is displayed when status = 'In Progress' only. User name that approve the record. User to enter free text value with maximum 300 characters.	No	Text field
27.	Rejected By	Field is displayed when status = 'Rejected' only. User who rejected the quarantine record. Displayed based on user's first name and last name from Maintenance>HQ Security>User Profile.	No	Read-only
28.	Reject Reason	Field is displayed when status = 'Rejected' only. Field is displayed on click of 'Reject' button and user to enter free text value with maximum 100 characters.	Yes	Text field
Material Section				
29.	Seq. No	Display the record sequence number. Field is auto-populated by system and is read only.	No	Read-only
30.	Item Code and Description	Item Code and Description will display the item details based on the selected formulation. Description suffix will	No	Read-only

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No.	Name	Description	Mandatory	Format
		be displayed with the item description (if any). For example: Description suffix = q.s Drug Name = Syrup BP / Simple Syrup Material Description will be displayed as, Syrup BP / Simple Syrup (q.s)		
31.	Quantity	Quantity is displayed by default based on the selected formulation. Value is auto-update once user change the value for Quantity or Pack Size based on the calculation as below: i. When Quantity UOM = Pack Size UOM Material Qty = (WO Qty * FO Material Qty) / FO Qty ii. When Quantity UOM ≠ Pack Size UOM Material Qty = [(WO Pack Size * FO Material Qty) / FO Pack Size] * [WO Qty / FO Qty] WO – Work Order FO – Formulation Value is auto-calculated and not editable. Quantity UOM is displayed based on the setup in Formulation which refers to the Material Item Quantity UOM from Drug Master.	No	Read-only
32.	Allocate Quantity	On click of 'Allocate Quantity' hyperlink after save record and before confirms record, screen Item Batch is displayed. Item Batch listed based on all batches with available quantity (after minus reserved quantity) and for all items belongs to the same drug of the raw material. On manual allocation, system will auto default the Allocate Quantity value based on the first expiry first out method. Only one batch number is allowed to be allocated per each raw material and value must be the same with value in 'Quantity' column. User can also de-allocate the batch by saving the allocated quantity as 0. Value will be displayed based on the calculation as below: • Material Quantity / Conversion Factor from Drug Master for the Material Item and round up to the next integer. Value is not editable; user can only update the allocated batch. • Allocate Quantity UOM is displayed based on the setup in Formulation which refers to the Material Item SKU UOM from Drug Master.	No	Read-only

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No.	Name	Description	Mandatory	Format
33.	Batch No	Batch Number is displayed based on the selected batch in the Item Batch Details screen. User is allowed to only select one batch for each Material Item as per the GMP (Good Manufacturing Practice) standard.	No	Read-only
34.	Expiry Date	Display Expiry Date value based on the allocated batch in Item Batch details screen.	No	Read-only
Add Procedures				
35.	Seq. No	Display the record sequence number. Field is auto-populated by system and is read only.	No	Read-only
36.	Process Instruction	Display the procedures as per entered in the selected Formulation record.	No	Read-only

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3.2.4.2.3 *Print Worksheet*

3.2.4.2.3.1 ***Screen Design***

ID	WO.SD3
Description	To view and print Worksheet

Diagram

i. Print Worksheet before Confirm record

GALENICAL WORKSHEET (DRAFT)

MINISTRY OF HEALTH

Hospital Pakar Sultanah Fatimah, Muar

Request Date	:07/06/2018	**Worksheet ID**	: 18-06-0003	**Request Qty**	: 100 ml
Shelf Life	:1 Months	**Pack Size**	: 100 ml	**Qty Prepared**	: 0 ml
Preparation Type	:Non Sterile External			**Batch No**	: MANF-18067-1
Item Description	:Sodium Bicarbonate Mouthwash			**Expiry Date**	: 07/07/2018

Ingredients	Vol. per Qty.	Total	Expiry Date	Batch ID	Allocated Qty
Sodium Bicarbonate BP/USP	2 g	2 g	21/03/2020	D1170029	2 g
Consumables :					
Distilled Water (by volume)	100 ml	100 ml			

Procedure :

1 Dissolve sodium bicarbonate powder in sufficient amount of water

2 Make up to final volume with water and mix well

3 Package and label appropriately

Storage :
Room Temperature (< 25 C)

Label :

Remarks
2%

Reference:

Worksheet Prepared By :	Prepared by :	Approved by :
Pharmacist Manufacturing		
Date: 07/06/2018	Date:	Date:

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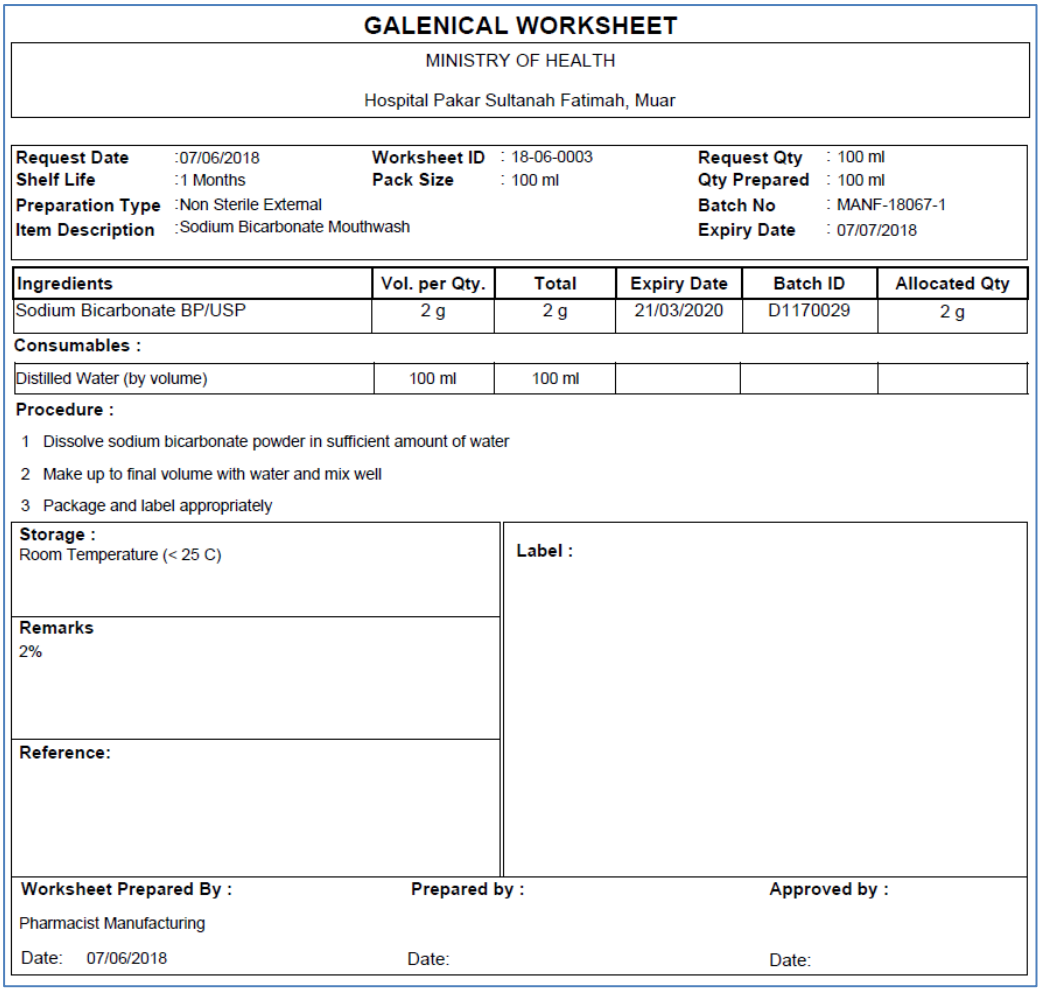
ii. Print worksheet after Production Complete



GALENICAL WORKSHEET

MINISTRY OF HEALTH

Hospital Pakar Sultanah Fatimah, Muar

Request Date	:07/06/2018	**Worksheet ID**	: 18-06-0003	**Request Qty**	: 100 ml
Shelf Life	:1 Months	**Pack Size**	: 100 ml	**Qty Prepared**	: 100 ml
Preparation Type	:Non Sterile External			**Batch No**	: MANF-18067-1
Item Description	:Sodium Bicarbonate Mouthwash			**Expiry Date**	: 07/07/2018

Ingredients	Vol. per Qty.	Total	Expiry Date	Batch ID	Allocated Qty
Sodium Bicarbonate BP/USP	2 g	2 g	21/03/2020	D1170029	2 g

Consumables :

Distilled Water (by volume)	100 ml	100 ml			

Procedure :

1 Dissolve sodium bicarbonate powder in sufficient amount of water

2 Make up to final volume with water and mix well

3 Package and label appropriately

Storage :
Room Temperature (< 25 C)

Label :

Remarks
2%

Reference:

Worksheet Prepared By :	**Prepared by :**	**Approved by :**
Pharmacist Manufacturing		
Date: 07/06/2018	Date:	Date:

Notes	• Click on 'Worksheet' button to view and print worksheet.
Cross References	

3.2.4.2.3.2 ***Application Business Rules***

No.	Name	Description
1.	Generate worksheet before Confirm record.	After saving the work order record, when record status is New, click on the Worksheet button and user will be able to view and print the draft Worksheet. Worksheet will be displayed as draft due to record is not yet confirmed, only for the purpose of verifying the worksheet before confirming the record. Value for 'Qty Prepared', 'Prepared By' and 'Approved By' are empty due to value will only be available when the record status is Completed.
2.	Generate worksheet after Complete or Release record.	When record status is Completed or Released, click on the Worksheet button and user will be able to view and print the final Worksheet where 'Qty Prepared', 'Prepared By' and 'Approved By' fields updated as per the value as entered on the work order screen.

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No.	Name	Description
3.	Request Date	Value displayed based on 'Request Date' field on the work order screen.
4.	Worksheet ID	Field value is auto-generated as displayed in 'Work Order No' field on the work order screen.
5.	Request Qty	Display value based on the 'Request Quantity' field as entered on the work order screen.
6.	Shelf Life	Display value based on the 'Shelf Life' field as entered on the work order screen.
7.	Pack Size	Display value based on the 'Pack Size' field as entered on the work order screen.
8.	Qty Prepared	Display value based on the 'Quantity Prepared' field as entered on the work order screen.
9.	Preparation Type	Display value based on 'Preparation Type' field on the work order screen.
10.	Item Description	Display value based on 'Item Description' field on the work order screen.
11.	Batch No	Display value based on 'Batch No' field on the work order header screen.
12.	Expiry Date	Display value based on 'Expiry Date' field on the work order header screen.
13.	Ingredients/ Consumables	Display the Item Description for each material item. Display item under 'Ingredients' section if Item Group = Drug. Display item under 'Consumables' section if Item Group = Non-Drug.
14.	Vol. per Qty.	Value is displayed based on the calculation record: i. When Quantity UOM = Pack Size UOM Vol per Qty = (WO Pack Size * WO Material Qty) / WO Qty ii. When Quantity UOM ≠ Pack Size UOM Vol per Qty = WO Material Qty / WO Qty WO is Work Order and UOM is displayed based on the Material Qty UOM.
15.	Total Qty	Value is displayed based on the 'Quantity' column as displayed in the material section on work order screen.
16.	Expiry Date	Display the 'Expiry Date' based on the allocated batch for each material item.
17.	Batch ID	Display the 'Batch No.' based on the allocated batch for each material item.
18.	Allocated Qty	Display the 'Allocated Quantity' based on the allocated batch for each material item.
19.	Procedure	Display the procedures entered in the Procedures section on the work order screen.
20.	Storage	Display value based on 'Storage Condition' field on the work order header screen.
21.	Label	This column is empty for user to paste the printed label on the worksheet.

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No.	Name	Description
22.	Reference	Display value based on the 'Request Reference' value as displayed on the work order screen.
23.	Worksheet Generated By	Worksheet Prepared By. Display the user first name and last name as displayed in 'Request By' field on the work order screen.
24.	Prepared By	Manually filled in by user.
25.	Approved By	Manually filled in by user.

3.2.4.2.3.3 *Input Validation Rules*

None.

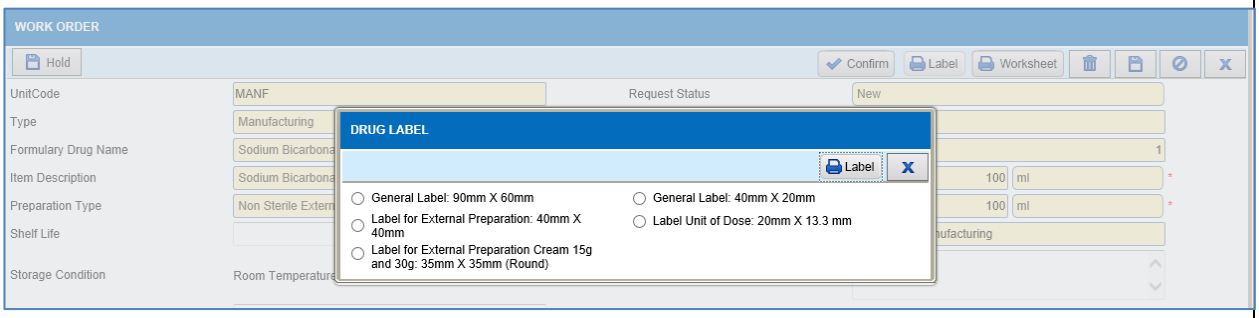
3.2.4.2.4 *Print Label*

3.2.4.2.4.1 *Screen Design*

ID	WO.SD4
Description	To view and print Label for General/PN drug

Diagram

i. General Label: Options



ii. General Label: 90mm x 60mm

Hospital Pakar Sultanah Fatimah, Muar	
Sodium Bicarbonate Mouthwash	
Qty: 100 ml	
Batch No: MANF-18067-1	**Worksheet ID:** 18-06-0003
Date Prepared: 07/06/2018	**Date Exp:** 07/07/2018
Storage : Room Temperature (< 25 C)	

iii. General Label: 40mm x 20mm

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Sodium Bicarbonate Mouthwash Qty : 100 ml Batch : MANF-18067-1 Prep Date:07/06/2018 Exp Date :07/07/2018 Hospital Pakar Sultanah Fatimah, Muar	Sodium Bicarbonate Mouthwash Qty : 100 ml Batch : MANF-18067-1 Prep Date:07/06/2018 Exp Date :07/07/2018 Hospital Pakar Sultanah Fatimah, Muar
Sodium Bicarbonate Mouthwash Qty : 100 ml Batch : MANF-18067-1 Prep Date:07/06/2018 Exp Date : 07/07/2018 Hospital Pakar Sultanah Fatimah, Muar	Sodium Bicarbonate Mouthwash Qty : 100 ml Batch : MANF-18067-1 Prep Date:07/06/2018 Exp Date :07/07/2018 Hospital Pakar Sultanah Fatimah, Muar

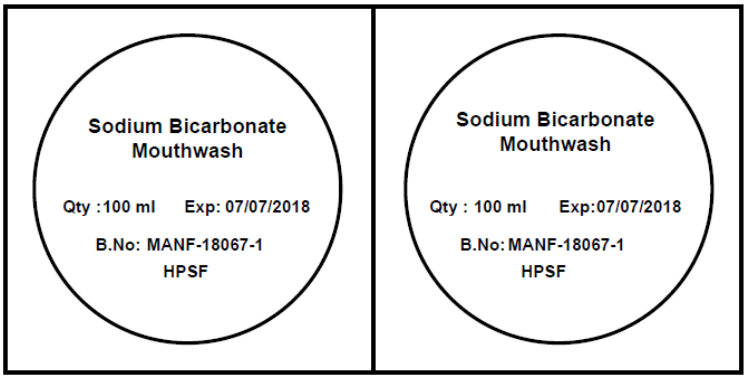
iv. Label for External Preparation: 40mm x 40mm

TIDAK BOLEH DIMINUM NOT TO BE TAKEN Jauhi ubat dari kanak-kanak Sodium Bicarbonate Mouthwash Qty : 100 ml Batch No: MANF-18067-1 Prep Date :07/06/2018 Exp Date :07/07/2018 Hospital Pakar Sultanah Fatimah, Muar	TIDAK BOLEH DIMINUM NOT TO BE TAKEN Jauhi ubat dari kanak-kanak Sodium Bicarbonate Mouthwash Qty : 100 ml Batch No : MANF-18067-1 Prep Dat :07/06/2018 Exp Date :07/07/2018 Hospital Pakar Sultanah Fatimah, Muar

v. Label Unit of Dose: 20mm x 13.3mm

Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018
Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018
Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018	Sodium Bicarbonate Mouthwash BN:MANF-18067- Exp: 07/07/2018

vi. Label for External Preparation Cream 15g and 30g: 35mm x 35mm (Round)



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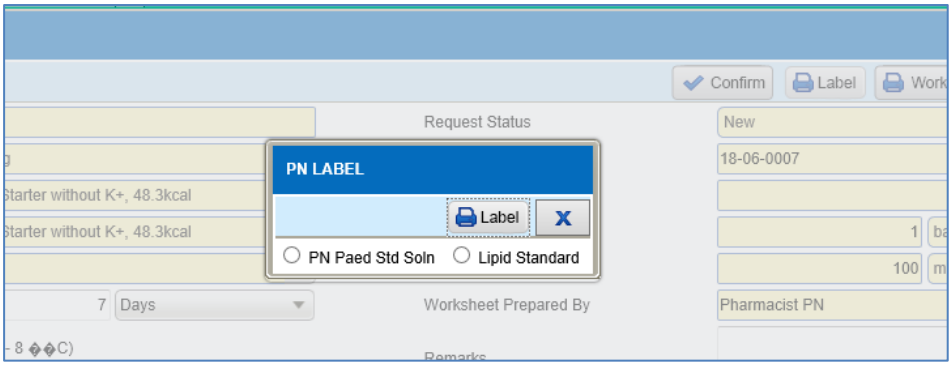
vii. PN Label: Options



viii. PN Paed Std Soln

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Hospital Pakar Sultanah Fatimah, Muar		
PARENTERAL NUTRITION (PAEDIATRIC)		
PN Soln 10, Starter without K+, 48.3kcal		
NAME :	**AGE :**	
MRN :	**WARD :**	
Total Volume :	**100 ml/bag**	
Content per bag		
Protein	2.8 g	
Dextrose	10 g	
Sodium	2 mmol	
Potassium	0 mmol	
Calcium	1.2 mmol	
Magnesium	0.14 mmol	
Phosphate	1 mmol	
Chloride	0.02 mmol	
Acetate	0 mmol	
Trace Element	0 mL	
Calories	48.29 kcal	
Osmolarity	830.49 mosm/L	
Date and Time of Administration :		
Infusion	**_____ mL/Hrs**	
Batch No TPN-18067-5	**Expiry 14/06/2018**	**Price : RM**
Do not use if any visible solid particles, growth precipitation appears		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 48 hours) Ensure PN Solution is at room temperature before infusion		
Name : **MRN :** **Ward :** **Age :** **Gender:** **Birth/Current Body Weight:** **Date Administer :** **Batch No :** **Expiry Date :**		
(Please fill up and send back this portion to PN		

ix. Lipid Standard

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Hospital Pakar Sultanah Fatimah, Muar	
PN Soln 10, Starter without K+, 48.3kcal	
LIPID : 0 mL	Batch No: TPN-18067-5 Worksheet ID: 18-06-0007
VITALIPID: 0 mL	Date Prepared: 07/06/2018
SOLUVIT: 0 mL	Exp date: 14/06/2018
Total Vol: 0 mL	Price (RM):
Stable for 6 days at 2-8 °C & 1 day at 25 °C	

Hospital Pakar Sultanah Fatimah, Muar	
PN Soln 10, Starter without K+, 48.3kcal	
LIPID : 0 mL	Batch No: TPN-18067-5 Worksheet ID: 18-06-0007
VITALIPID: 0 mL	Date Prepared: 07/06/2018
SOLUVIT: 0 mL	Exp date: 14/06/2018
Total Vol: 0 mL	Price (RM):
Stable for 6 days at 2-8 °C & 1 day at 25 °C	

Hospital Pakar Sultanah Fatimah, Muar	
PN Soln 10, Starter without K+, 48.3kcal	
LIPID : 0 mL	Batch TPN-18067-5 Worksheet ID: 18-06-0007
VITALIPID: 0 mL	Date Prepared: 07/06/2018
SOLUVIT: 0 mL	Exp date: 14/06/2018
Total Vol: 0 mL	Price (RM):
Stable for 6 days at 2-8 °C & 1 day at 25 °C	

Notes	• Click on the 'Label' button to print label. • Galenical label is categorized into 2 types: Normal Drug Label and PN Drug Label.
Cross References	

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3.2.4.2.4.2 ***Application Business Rules***

No.	Name	Description
1.	Normal Drug Label	On click of Label button: i. Printing options will be displayed. ii. Select which label size to print and click on the print label button. User then can view and print the label.
2.	PN Drug Label	PN Drug Label is displayed only when PN Type in Drug Master is TPN. On click of Label button: i. Printing options will be displayed with the selection of 'PN Paed Soln' or 'Lipid Standard' ii. Select which label to print and click on the print label button. User then can view and print the label.
Normal Drug Label		
3.	90mm x 60mm	Details by value as below: • Facility Name: Display based on the 'Facility Name' as per setup in Facility Information maintenance screen. • Drug Name: Display based on the 'Formulary Drug Name' in work order header screen. • Qty: Display based on the 'Pack Size' and 'Pack Size UOM' in work order header screen. • Batch No: Display based on the 'Batch No' in work order header screen. • Worksheet ID: Display based on the 'Work Order No' in work order header screen. • Date Prepared: Display based on the 'Request Date' in work order header screen. • Date Exp: Display based on the 'Expiry Date' in work order header screen. • Storage: Display based on the 'Storage Condition' in work order header screen.
4.	40mm x 20mm	Details by value as below: • Facility Name: Display based on the 'Facility Name' as per setup in Facility Information maintenance screen. • Drug Name: Display based on the 'Formulary Drug Name' in work order header screen. • Qty: Display based on the 'Pack Size' and 'Pack Size UOM' in work order header screen. • Batch No: Display based on the 'Batch No' in work order header screen. • Prep Date: Display based on the 'Request Date' in work order header screen. • Exp Date: Display based on the 'Expiry Date' in work order header screen.

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No.	Name	Description
5.	40mm x 40mm	Details by value as below: • Facility Name: Display based on the 'Facility Name' as per setup in Facility Information maintenance screen. • Drug Name: Display based on the 'Formulary Drug Name' in work order header screen. • Qty: Display based on the 'Pack Size' and 'Pack Size UOM' in work order header screen. • Batch No: Display based on the 'Batch No' in work order header screen. • Prep Date: Display based on the 'Request Date' in work order header screen. • Exp Date: Display based on the 'Expiry Date' in work order header screen.
6.	20mm x 13.3mm	Details by value as below: • Drug Name: Display based on the 'Formulary Drug Name' in work order header screen. • Batch No: Display based on the 'Batch No' in work order header screen. • Exp Date: Display based on the 'Expiry Date' in work order header screen.
7.	35mm x 35mm (Round)	Details by value as below: • Facility Prefix: Display based on the 'Facility Prefix' as per setup in Facility Information maintenance screen. • Drug Name: Display based on the 'Formulary Drug Name' in work order header screen. • Qty: Display based on the 'Pack Size' and 'Pack Size UOM' in work order header screen. • B. No: Display based on the 'Batch No' in work order header screen. • Exp: Display based on the 'Expiry Date' in work order header screen.
PN Paed Std Soln		
8.	Drug Name	Display based on the 'Formulary Drug Name' in work order header screen.
9.	Total Volume	Display based on the 'Pack Size' in work order header screen and UOM is hardcoded to mL/bag.
10.	Protein	Display based on the drug name for the formulary item: In TPN Source Content screen, (Amino acid / Volume) * Work Order Pack Size UOM hardcoded to 'g'.
11.	Dextrose	Display based on the drug name for the formulary item: In TPN Source Content screen, (Glucose / Volume) * Work Order Pack Size UOM hardcoded to 'g'.

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No.	Name	Description
12.	Sodium	Display based on the drug name for the formulary item: In TPN Source Content screen, (Sodium / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
13.	Potassium	Display based on the drug name for the formulary item: In TPN Source Content screen, (Potassium / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
14.	Calcium	Display based on the drug name for the formulary item: In TPN Source Content screen, (Calcium / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
15.	Magnesium	Display based on the drug name for the formulary item: In TPN Source Content screen, (Magnesium / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
16.	Phosphate	Display based on the drug name for the formulary item: In TPN Source Content screen, (Phosphate / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
17.	Chloride	Display based on the drug name for the formulary item: In TPN Source Content screen, (Chloride / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
18.	Acetate	Display based on the drug name for the formulary item: In TPN Source Content screen, (Acetate / Volume) * Work Order Pack Size UOM hardcoded to 'mmol'.
19.	Trace Element	Display based on the drug name for the formulary item: In TPN Source Content screen, (Trace Element / Volume) * Work Order Pack Size UOM hardcoded to 'ml'.
20.	Calories	Display based on the drug name for the formulary item: In TPN Source Content screen, (Total Energy / Volume) * Work Order Pack Size UOM hardcoded to 'kCal'.
21.	Osmolarity	Display calculated value based on each material item: In PPN Source Content screen, Osmolarity (Sum of all material items) = (Material Quantity / Work Order Header: Request Quantity) * 1000] * (PPN Source Content: Osmolarity) UOM hardcoded to 'mOsm/L'.
22.	Batch No	Display based on the 'Batch No' in work order header screen.
23.	Expiry Date	Display based on the 'Expiry Date' in work order header screen.

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No.	Name	Description
Lipid Standard		
24.	Drug Name	Display based on the 'Formulary Drug Name' in work order header screen.
25.	Lipid Soln	Display value from material quantity for material item. Material item should be based on Drug Master, PN Type = PPN and in PPN Source Content the drug is identified as Lipid. UOM is hardcoded to mL.
26.	Vitalipid	Display value from material quantity for material item. Material item should be based on Drug Master, PN Type = PPN and in PPN Source Content the drug is identified as Fat Soluble. UOM is hardcoded to mL.
27.	Soluvit	Display value from material quantity for material item. Material item should be based on Drug Master, PN Type = PPN and in PPN Source Content the drug is identified as Water Soluble. UOM is hardcoded to mL.
28.	Total Vol	Value is calculated based on the addition of all values in 'Lipid Soln', 'Vitalipid' and 'Soluvit' column.
29.	Batch No	Display based on the 'Batch No' in work order header screen.
30.	Worksheet ID	Display based on the 'Work Order No' in work order header screen.
31.	Date Prepared	Display based on the 'Request Date' in work order header screen.
32.	Expiry Date	Display based on the 'Expiry Date' in work order header screen.
33.	Price (RM)	No value for 'Price'. Field is left empty for user to manually fill in.
34.	Storage	Hardcoded to '(6 days at 2-8^{o}C & 1 day at 25^{o}C)

3.2.4.2.4.3 *Input Validation Rules*

None.

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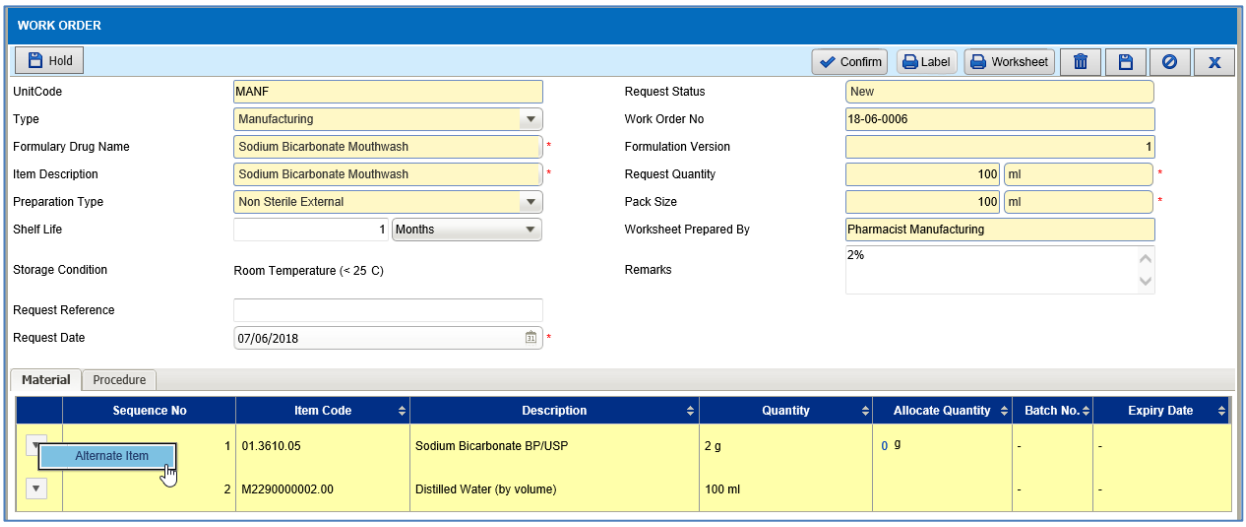
3.2.4.2.5 *Alternate Item*

3.2.4.2.5.1 ***Screen Design***

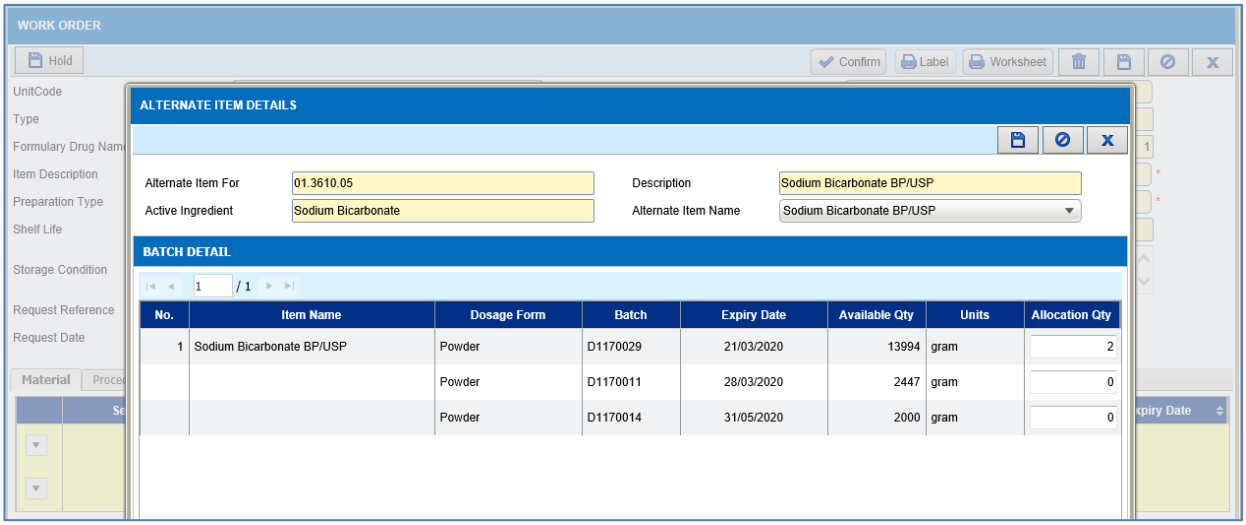
ID	WO.SD5
Description	To allocate Alternate Item batch

Diagram

i. Click on 'Alternate Item' menu



ii. View Alternate Item Batch screen



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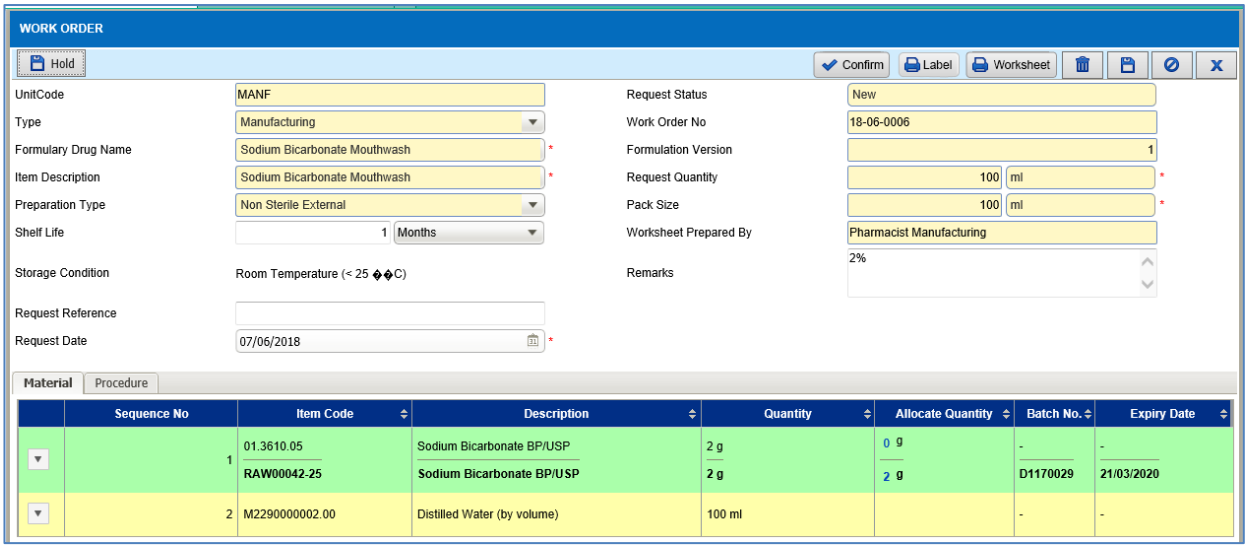
iii. Save Alternate Item record



Notes	• Click on the context menu 'Alternate Item' to open Alternate Item screen. • Click on 'Cancel' button to reset the newly entered record. • Click on 'Save' button to save batch details record.
Cross References	

3.2.4.2.5.2 ***Application Business Rules***

No.	Name	Description
1.	Alternate Item condition	'Alternate Item' menu is enabled when: i. Work Order type is 'Manufacturing'. ii. Material Item Type is Ingredients. Alternate is only for drug material item. iii. Work Order record status is New. Alternate Item screen can be viewed only when the value in 'Allocate Quantity' column is 0. System will display alert message if value is not 0 and user is requires to edit the allocate quantity value. System will list the alternate items for the material item based on the condition as below: i. Material Item has Strength and Strength UOM value in Drug Master; List will display Item where in Drug Master, - Same Active Ingredient - Same Strength and Strength UOM User can only alternate with item that has the same active ingredient and strength as the ordered material item. ii. Material Item Strength value is 0; List will display Item where in Drug Master, - Same Active Ingredient

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No.	Name	Description
		- Same Quantity UOM (Not necessarily same Quantity value) User can alternate with the same active ingredient and quantity UOM as the ordered material item. User is allowed to allocate for one alternate item and one batch only for each material item.
2.	Save Alternate Item record	On click of the save button: i. System will save the alternate allocate quantity and display the alternate item as a second row below the original material item. 'Batch number' and 'Expiry Date' will display based on the allocation in the Alternate Item screen. ii. User is not allowed to do allocation for the original material item. System will display alert message if user try to allocate the quantity for the original item where user need to update the allocation for alternate to 0 before allocate the original item quantity.

3.2.4.2.5.3 ***Input Validation Rules***

No.	Name	Description	Mandatory	Format
1.	Alternate Item Name	Drop down will list the alternate items for the material item based on the condition as below: i. Material Item has Strength and Strength UOM value in Drug Master; List will display Item where in Drug Master, - Same Active Ingredient - Same Strength and Strength UOM ii. Material Item Strength value is 0; List will display Item where in Drug Master, - Same Active Ingredient - Same Quantity UOM (Not necessarily same Quantity value) This field is mandatory.	No	Drop down list
2.	Allocation Qty	Once user selects value in Alternate Item drop down, allocate quantity value is default based on the calculation below: • Material Quantity / Conversion Factor from Drug Master for the Alternate Item • Allocation is default to the first expiry batch number. • User is allowed to change the batch with condition that the quantity should still be the same and only one batch can be allocated for each material. User can also de-allocate the batch by saving the allocated quantity as 0. • User to key in only integer value.	No	Text field

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3.2.5 Integration

None.

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4. References

List out the documents in which the stated procedures in this document refer to.

Document	Description/ Expansion

5. Acronyms

Item	Description
UOM	Unit of Measurement
BPF	Bahagian Perkhidmatan Farmasi
HQ	Headquarters

6. Appendix

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