BatchMaster Web - Advanced Formulation User Guide

Product Version: BatchMaster Web	**Doc Version: 01**
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About the Manual

Purpose of the Manual

This user guide provides instructions for using BatchMaster Enterprise. The scope of the document is limited to training users on how various BatchMaster modules are inter-related, the purpose of various BatchMaster screens, and the procedural steps to maintain them. The training objective is to help the user get hands-on experience of how BatchMaster Enterprise functions.

This document aids as a hand-out during training and as an introduction to other manuals. It is not as descriptive as other accompanying manuals, but it is packed with necessary and important information that is required for someone to use BatchMaster Enterprise as a new user.

We designed the user guide based on experience obtained from numerous training sessions. This document aims to strengthen user knowledge on the functioning of BatchMaster Enterprise.

Target Audience

This document is intended for a vast group of people which may include Trainers, VARs, Customers, and even BatchMaster employees who are undergoing BatchMaster training. We hope it will be of immense use as a conceptual guide for Trainers, as a resource material for VARs and customers, and as a reference guide for existing BatchMaster Users and employees.

Organization

The user guide is organized module-wise to reduce bulkiness and enhance usability. Each module contains an overview of the module, concepts you must know before you begin using the module, an overview or purpose of the screen, how to maintain data in the screen, Key Points, and FAQs. Examples have been included to help you understand the logic better and maintain data quickly.

Symbols & Conventions

Symbol	Description
	Note
	Mandatory setting
	Tips

Convention	Description
Italicized (Sales Order Entry)	Module name, screen name & components
“ ” (“BatchMaster Web Accounting Guide”)	Reference document

Abbreviation	Description
BME WEB	BatchMaster WEB

Contents

1 DOCUMENT OVERVIEW

Optimized Formulation in advanced Production is of utmost importance for the overall success and profitability of an enterprise. The *Advanced Formulation* solution provided by BatchMaster Web is easy to use software for *Least Cost Advanced Formulation*. The Advanced Formulation solution provides a way to handle 'n' number of ingredients and nutrients. You can create a formula with the least cost and transfer this formula to BatchMaster Software along with a batch creation facility.

1.1 What's New in this Version?

- This is a new product.

1.2 Key Services Offered

- Create a formula which is based on Item Cost and Nutrition requirements which can be transferred to BatchMaster Software.
- Create a batch directly with just a single click.
- Attach packaging items to the formula while creating the formula.

2 Inventory

2.1 Serial Lot Handling

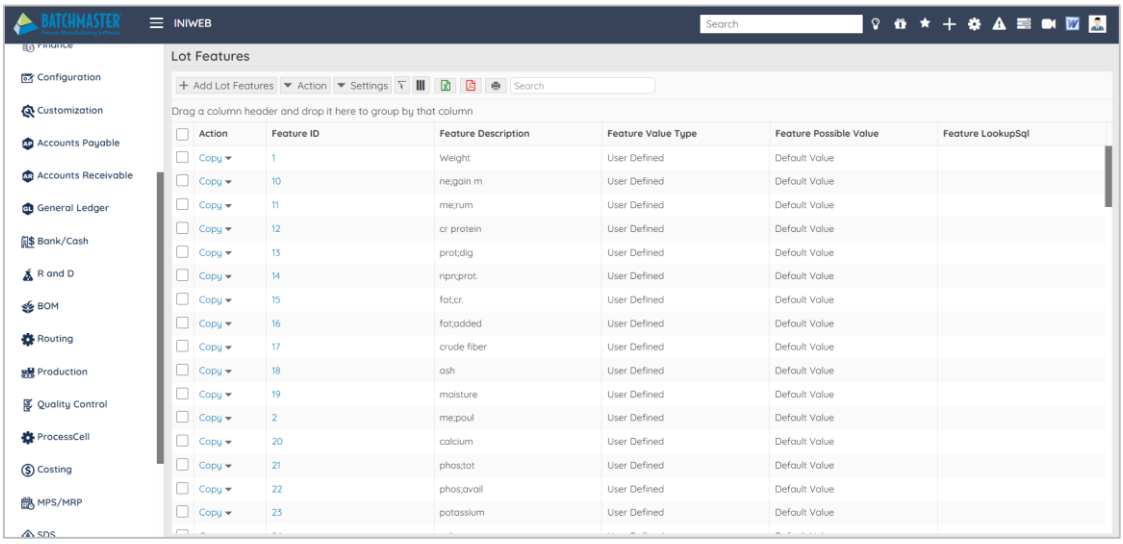
2.1.1 Lot Features

You can define lot features on the *Lot Features* screen, and then assign these features to the items corresponding to several item locations using the *Item Wise Lot Features* screen. The values of the lot features can be assigned to the desired serial/lots of an item location using the *Serial Lot Maintenance* screen. You can also retrieve lots on the basis of lot features and feature values using the *Serial Lot Maintenance* screen.

Go To: Inventory → Serial Lot Handing → Lot Features.

2.1.2 Lot Features – Dashboard

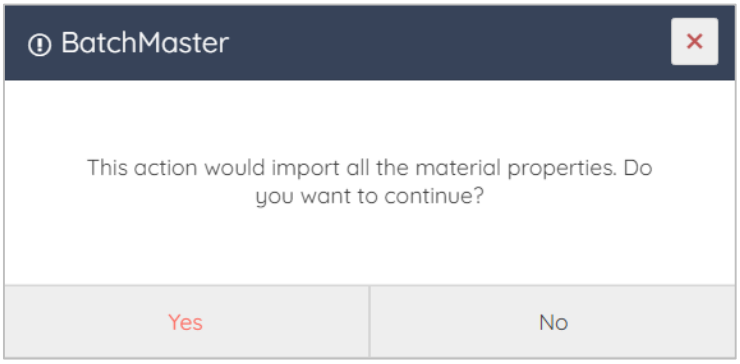
You can manage lot feature records from this dashboard. By default, the system displays all the existing records maintained for your business/company. You can click on any of the record to view its details.



The *Lot Features* dashboard contains many elements that occupy 100% of the browser window. Resizing the window will resize the elements to fit. The elements can be rearranged, i.e. docked, resized, grouped, and stacked. The header and the side panel can't be rearranged.

Using the *Action* button from the dashboard you can:

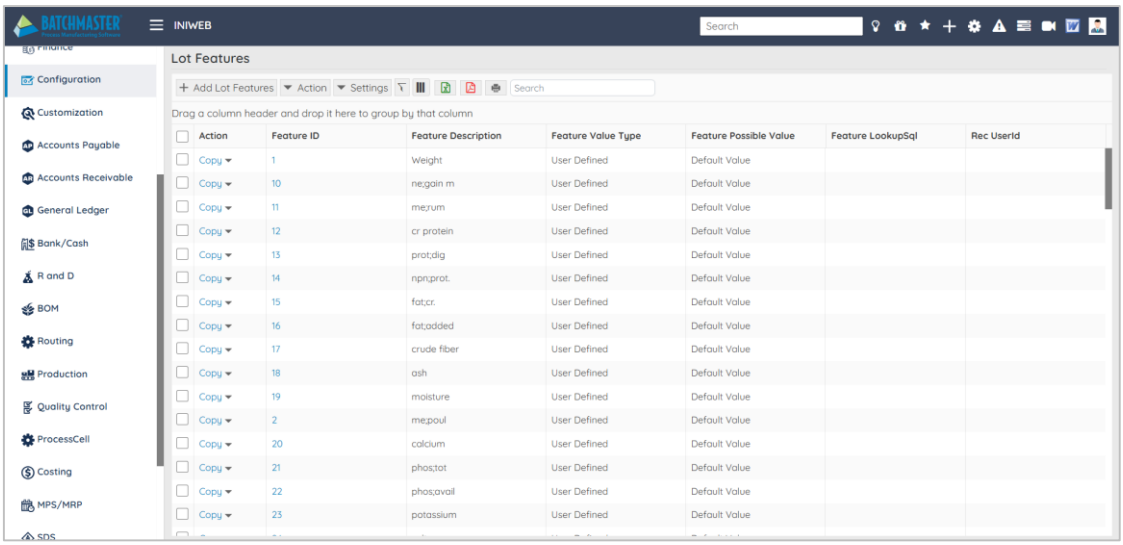
- Copy an existing record to create new one
- Delete selected record(s)
- Import the properties maintained via the *Material Property Master* screen. On clicking *Import Properties* option, the system displays a warning message as shown below:



On clicking *Yes* button, the system imports the material properties and displays a success message as shown below:

If a record already exists for a property then, system won't import that property again. The Lot Feature records created via importing obtains the *Feature Id*, *Feature Description*, and *Feature Value Type*.

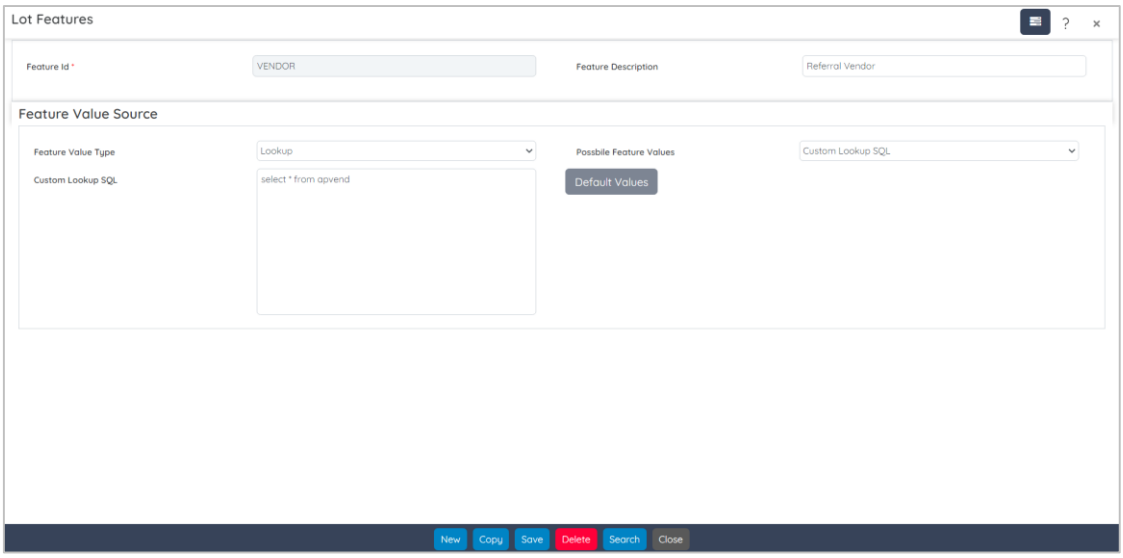
After you select all the columns of the *Lot Features* dashboard, the middle grid displays the selected columns.



The *Lot Feature* dashboard provides a clear vision of the created records in a read-only mode. You can view the records as per the number of items per page specified.

2.1.3 Lot Features Screen – Add Mode

To define lot features, click the +*Add Lot Features* button. The system displays the *Lot Features* form where you can specify lot features.



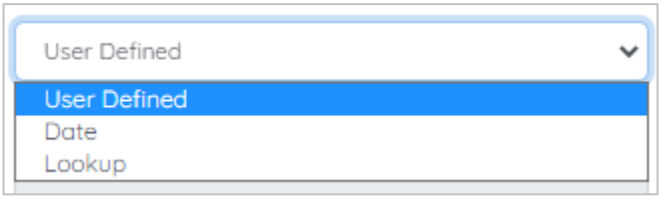
Screen Fields:

Feature Id: This is the ID that uniquely identifies this Lot Feature. This is a mandatory field.

Feature Description: This is a description of the Lot Feature. This is an optional field.

Feature Value Source Section

Feature Value Type: It can be one of *User Defined, Lookup* and *Date*. If Date value is selected for the feature, the *Issue/Create Serial Lot Maintenance* screen shows the Current Date corresponding to the feature. If the option selected is *User Defined*, you can give any value based on your requirements, while selecting the option *Lookup* lets you further choose any option from *Default Value* or *Custom Lookup* in the *Possible Feature Values* field.



Possible Feature Values: It shows the option button as *Default Value* or *Custom Lookup*. This field is enabled if the *Lookup* option is selected in the *Feature Value Type* field. The available options in the dropdown are:

- **Default Value**: Selecting this option allows the user to maintain distinct default values for lot feature. Further, any value can be selected at Issue/Create Serial Lot of the respective item.

- **Custom Lookup:** If the *Custom Lookup* option is selected in the *Possible Feature Values* field, you can specify the SQL statement for a Custom lookup SQL here. The Result obtained depending on the given query can be seen on the *Serial Lot Maintenance* screen for every Issue/Create Serial Lot of an item.

Custom Lookup SQL: Use this field to specify the SQL command for the Custom Lookup. This field is enabled when the *Custom Lookup* option is selected in the *Possible Feature Values* field.

Default Values: The *Default Value* option lets you define the possible values in a separate Custom lookup SQL textbox after you click the *Default Value* button. This button is enabled when the *Default Value* option is selected in the *Possible Feature Values* field.

2.1.4 Creating Lot Features

1. Open the *Lot Feature* Dashboard.
2. Click on the *+Add Lot Feature* button. The system displays the *Lot Features* screen.
3. Enter a set of alphanumeric characters identifying the feature in the *Feature Id* field.
4. Enter a relevant description of the feature in the *Feature Description* field.
5. Use the drop-down menu in the *Feature Value Type* field to select the desired source for obtaining feature values. Available options are *User Defined, Date*, and *Lookup*.
    a. If you have chosen the feature value type as *Lookup,* choose one of the options corresponding to the *Possible Feature Values* field.
        - The *Custom Lookup* option lets you draw values from a SQL table already created. Specify the SQL command in the *Custom Lookup SQL* field.
        - The *Default Value* option lets you define the possible values in a separate *Custom Lookup SQL* textbox after you click the *Default Value* button.
6. Click the *Save* button to save the record.

3 Quality Control

3.1 Quality Control

3.1.1 QC Test

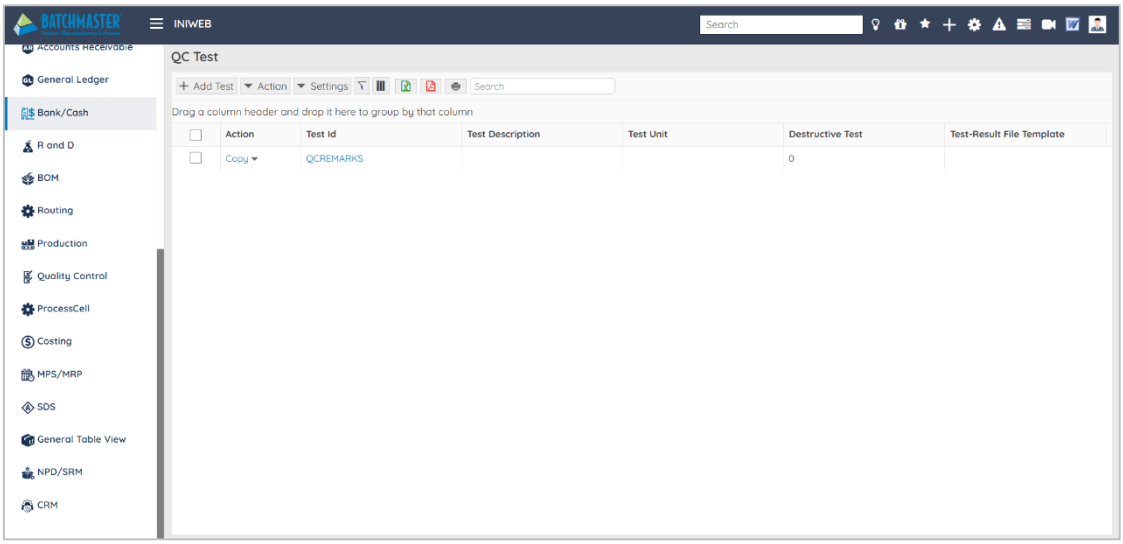
The *QC Test* screen lets you define various quality control tests by defining specific characteristics for testing the quality of an item. Once a test is defined, it can be assigned to the intended inventory item(s) via the *QC Item Test* screen, and have its expected results defined. You can also specify the default QC User who will perform the QC test.

QC testing must be planned and thought out to decide things like what exactly you are testing and testing for, the way the test is going to be run and applied, and the steps required to do so. All these scenarios should be clear in your mind before defining test(s). Tests usually take the form of does this product meet requirements? And are passed/failed accordingly.

Go To: Quality Control → Quality Control → QC Test.

3.1.2 QC Test – Dashboard

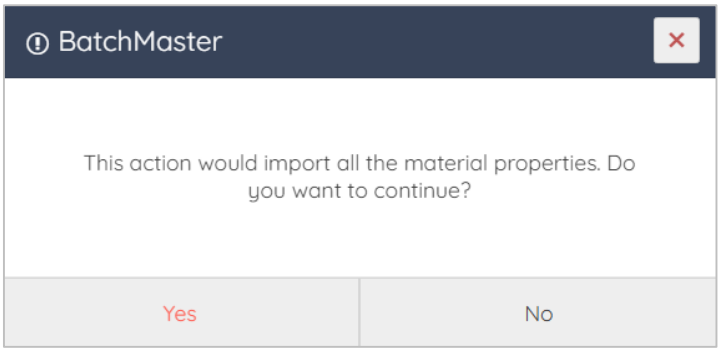
You can manage and create QC Tests from this dashboard. By default, the system displays all the existing QC Test records as maintained for your business/company. You can click on any of the QC Test record to view its details.



The *QC Test* dashboard contains many elements that occupy 100% of the browser window. Resizing the window will resize the elements to fit. The elements can be rearranged, i.e. docked, resized, grouped, and stacked. The header and the side panel can't be rearranged.

Using the *Action* button from the dashboard you can:

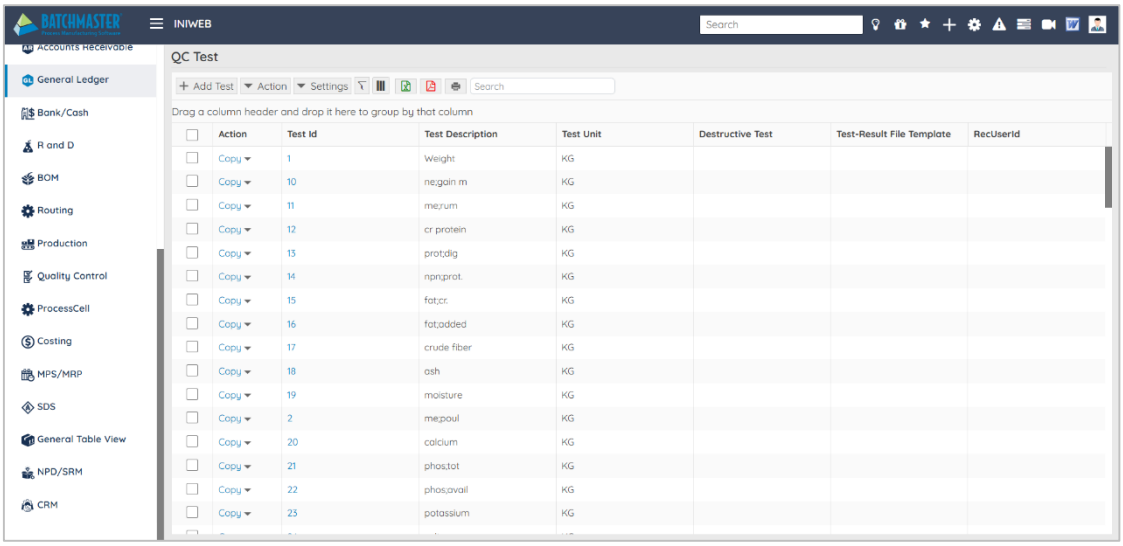
- Copy an existing record to create new one
- Delete selected record(s)
- Import the properties maintained via the *Material Property Master* screen. On clicking *Import Properties* option, the system displays a confirmation message as shown below:



On clicking *Yes* button, the system imports the material properties and displays a success message as shown below:

If a record already exists for a property then, system won't import that property again. The QC Test records created via importing obtains the *Test Id* and *Test Description*.

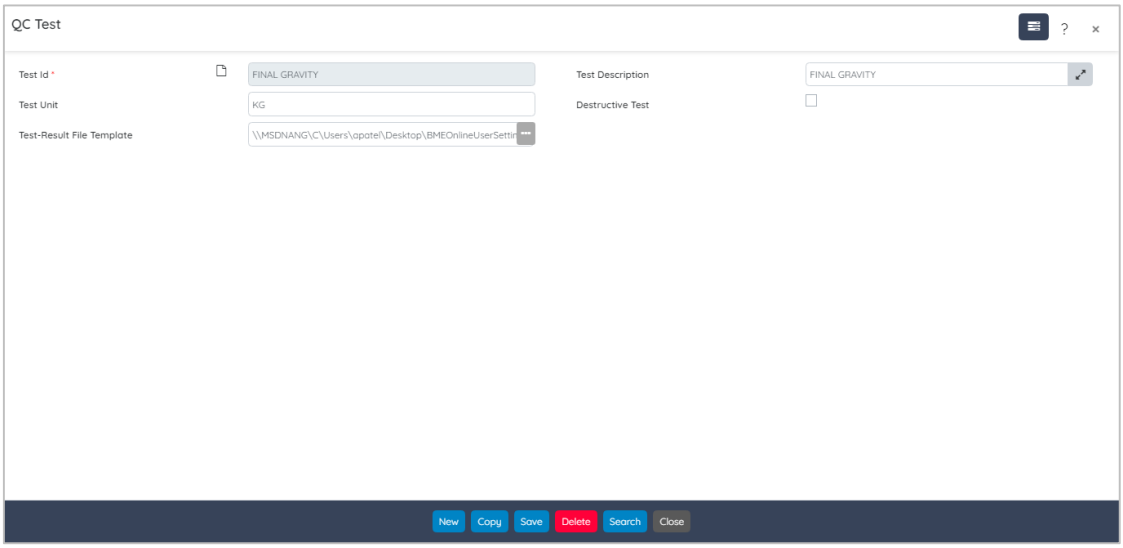
After you select all the columns of the *QC Test* dashboard, the middle grid displays the selected columns.



The *QC Test* dashboard provides a clear vision of the created records in a read-only mode. You can view the QC Test records as per the number of items per page specified.

3.1.3 QC Test Screen – Add Mode

To add a new QC Test to your BatchMaster WEB database, click the + *Add Test* button. The system displays the *QC Test* screen, where you can create a new record.



Screen Fields:

Test Id: This is the unique Identification code for the respective QC test defined on the screen. This is used in selecting the record on various screens of BatchMaster WEB. Even the selection criteria for generating reports recognize this ID only. It is a mandatory field and cannot have duplicates.

Test Description: This field displays the description associated with the Test Id. This is a read-only field.

Test Unit: This field displays the unit of measure in which the result of the respective QC Test is interpreted. This unit of measure is displayed on various reports. Note that this unit has no relationship to the various units that are maintained at the *Units* screen.

Destructive Test: Checking or un-checking this box specifies whether the test is destructive in nature or not. When a destructive test is done, you need to manually specify the quantity of the material scrapped due to a destructive test, on the *Inventory QC / Sales QC / Purchase QC* screens.

Test-Result File Template: This is the path of the Template-file that is used for storing the details of this test-result.

3.1.4 Creating a QC Test

1. Open the *QC Test* dashboard.
2. Click the *+Add Test* button to open the *QC Test* screen.
3. Enter the Test ID in the *Test Id* field.
4. Enter the Test ID's description in the *Test Description* field.

5. Enter a value in the *Test Unit* field, if needed.
6. If this is a destructive test, click the *Destructive Test* checkbox. Otherwise, leave it unchecked.
7. Specify a path in the *Test-Result File Template* field, if needed.
8. Click the *Save* button to save the record.

4 R and D

4.1 Laboratory

4.1.1 Advanced Formulation

The *Advanced Formula* Screen is where you define formulas. This feature centralizes your formulas and lets you maintain the formulas you use in production. The *Advanced Formula* screen can:

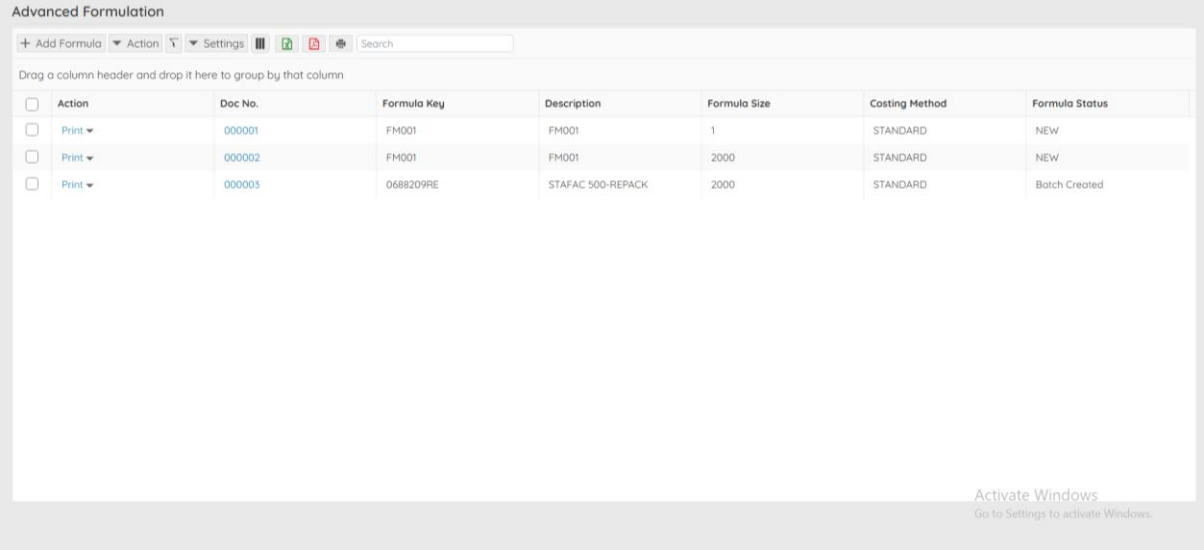
- Handle any number of ingredients and nutrients
- Calculates the least cost of the end product
- Creates formula within the Item Min Max range as specified on the *Advanced Formulation Setup* screen
- Cerates formula properties within Min Max range
- Calculates the result according to accuracy limit defined on the *Advanced Formulation Setup* screen
- Creates formula as per the size defined at right top corner of the screen

 Note that the *Advanced Formulation* screen won't have any provision for loss handling. If any losses are need to be attached then it should to be done through standard *Formula Entry* screen where the created formula is transferred via the *Transfer Formula* special function available at this screen.

Go To: R and D → Laboratory → Advanced Formulation.

4.1.2 Advanced Formulation – Dashboard

You can manage Advanced Formulation records from this dashboard. By default, the system displays all the existing records maintained for your business/company. You can click on any of the record to view its details.

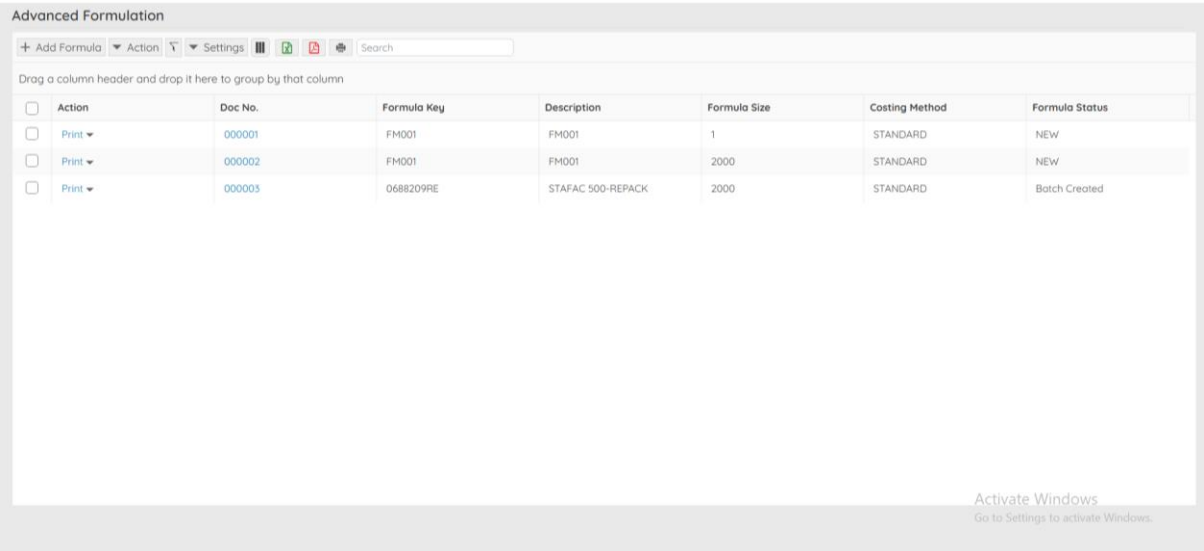


The *Advanced Formulation* dashboard contains many elements that occupy 100% of the browser window. Resizing the window will resize the elements to fit. The elements can be rearranged, i.e. docked, resized, grouped, and stacked. The header and the side panel can't be rearranged.

Using the *Action* button from the dashboard you can:

- Delete selected record(s)

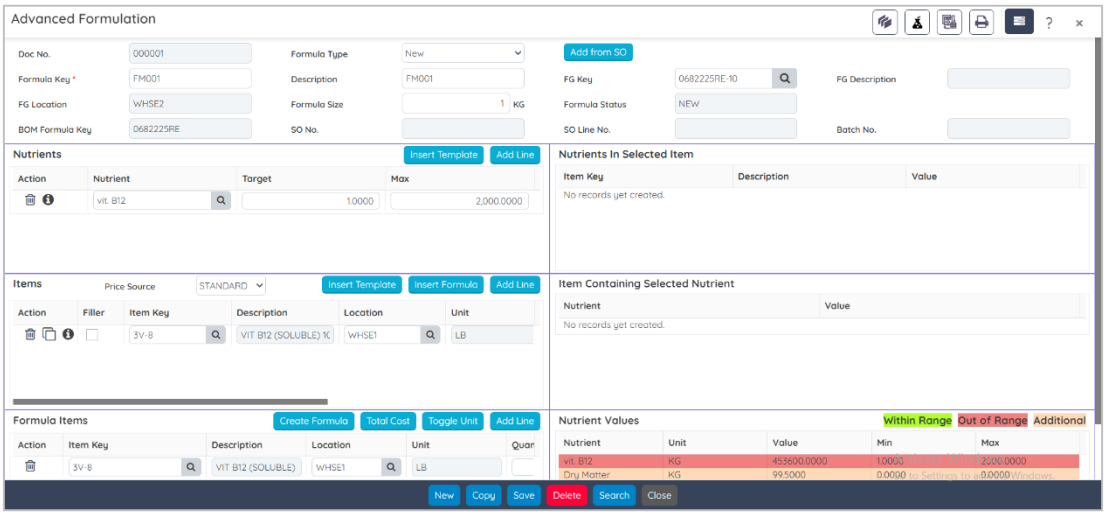
After you select all the columns of the *Advanced Formulation* dashboard, the middle grid displays the selected columns.



The *Advanced Formulation* dashboard provides a clear vision of the created records in a read-only mode. You can view the records as per the number of items per page specified.

4.1.3 Advanced Formulation Screen – Add Mode

To view an existing record or add a new Advanced Formulation record to your BatchMaster WEB database, click the *Add Formula* button. The system displays the *Advanced Formulation* screen, where you can create a new record.



Header Fields

Doc No.: This field displays system generated document number. This is a read-only field.

Formula Type: Use this field to select one of the option as *New* or *Select*.

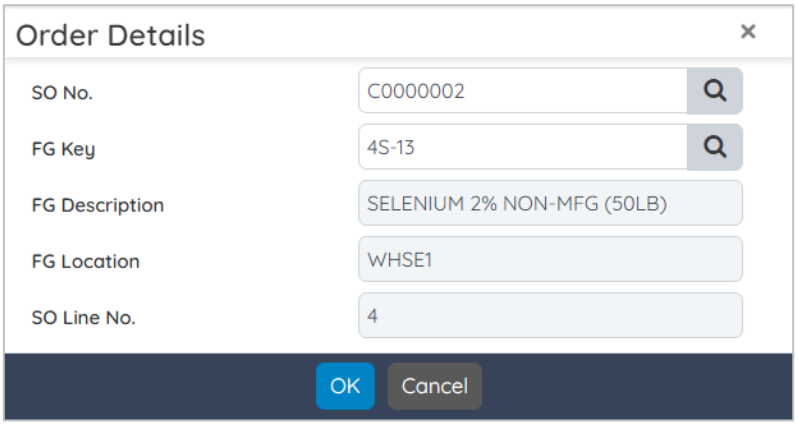
- **New:** Select this option to create a new formula.
- **Existing:** Select this option to use an existing formula.

If you have opted to use an existing formula and selected the Finished Good then, the system only fetch the associated Formula Id in the *Formula Key* field. System won't fetch the raw materials of that formula in the *Items* grid. If you want to add the materials of a formula then you have to add them using *Insert Formula* button available at *Items* section.

Add from SO: Click this button to obtain a formula from a sales order. Creating a formula for a sales order is for understanding/obtaining the specific quantities required to achieve the correct formula for fulfilling the order. By obtaining a formula from the sales order, you can ensure that the correct materials, aligned production steps, and specifications are in place to meet the production demands.

Creating a formula from a sales order items helps you to manage consistency for product quality and align with the item composition demands.

On clicking *Add from SO* button, the system displays *Order Details* screen for selecting Sales Order and Finished Goods key.



Order Details Screen Fields

SO No.: Use this field to select a Sales Order for which the formula is being created. The lookup here obtains all the Sales Orders except the Closed and Cancelled ones.

FG Key: Use this field to select the ordered Finished Good for which the formula is being created. The lookup here obtains all the items of the selected sales order.

FG Description: This field displays description of the selected FG Key. This is a read-only field.

FG Location: This field displays location of the selected FG Key. This is a read-only field.

SO Line No.: This field displays the line number of the FG in the selected Sales Order. This is a read-only field.

Formula Key: Use this field to assign a unique identifier to the formula being created. This is a mandatory field.

- If you select an existing formula, the field allows you to choose from pre-existing formulas using the lookup provided next to the field. If required, you can change the defaulted formula.
- If a finished good is selected via the *FG Key* field, the associated formula with the selected FG Key defaults to this field.

Description: Use this field to enter the description of the formula key. This is an optional field. If you select an existing formula via the *Formula Key* field, the system fetch the description associated with the selected formula. In such case, this field is read-only.

FG Key: Use this field to select a Finished Good for which the formula is to be created. The lookup here obtains all the finished goods maintained in BatchMaster Web. If you have selected *So No*. and *FG Key* on the *Order Details* screen by clicking the *Add from SO* button, the system automatically fetch the selected FG Key from the *Order Details* screen to this field. It is the BOM of the Intermediate/FG item for which the selected Sales Order was created. This BOM will be used in creation of a batch. A Batch will be created for the FG of the Sales Order and according to the Fill level, the batch quantity will be calculated. On the *Batch Ticket* screen, the lots are allocated automatically.

FG Description: This field displays the description of the selected FG Key. This is a read-only field.

FG Location: Use this field to specify the location of the selected Finished Good. If you have selected *So No*. and *FG Key* on the *Order Details* screen by clicking the *Add from SO* button, then the system automatically fetch the selected FG Key's location to this field.

Formula Size: Use this field to maintain the size of the formula being created. By default, the system fetch the default formula size maintained via the *Advanced Formulation Defaults* screen. This is an editable field. In case, If you have selected *So No*. and *FG Key* on the *Order Details* screen by clicking the *Add from SO* button, then the system automatically fetch the Ordered Quantity of that FG Item to this field (In converted System Weight Unit).

Formula Status: This field displays the current status of the formula that helps you to track the progress of a formula throughout its lifecycle. The possible formula statuses are:

- **New**: Indicates that a new formula record has been created.
- **Transferred**: The status changes from *New* to *Transferred* when the finalized formula is moved to the *Formula Entry* screen using the *Transfer Formula* special function.

BOM Formula Key: This field displays the existing Formula Key of the selected Finished Good via the *FG Key* field. This is a read-only field for information purpose only. If you are creating a *New* formula, this field is inapplicable and remains blank.

SO No.: By default this field remains blank if you are creating a *New* formula. If you have selected *So No.* and *FG Key* on the *Order Details* screen by clicking the *Add from SO* button, then the system automatically fetch the Sales Order selected to this field. This is a read-only field.

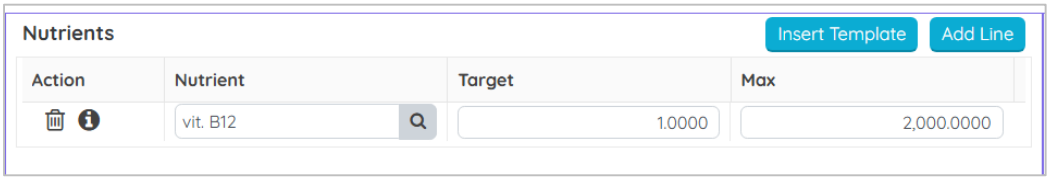
SO Line No.: This field displays the line number of the selected FG from the selected Sales Order if you have selected *So No.* and *FG Key* on the *Order Details* screen by clicking the *Add from SO* button.

This is a read-only field. If you are creating a *New* formula, this field is inapplicable and remains blank.

Batch No.: This field displays the Batch Number of the production batch created via this screen using the *Create Batch* special function. This is a read-only field. If you are creating a *New* formula, this field is inapplicable and remains blank.

Nutrients Section

Use this section to select the Nutrients for the formula. Here you can maintain the target values along with minimum and maximum value for each nutrient.



Insert Template: Click this button to insert the Nutrient Template.

Add Line: Click this button to add a row in the grid.

Action: The following options are available:

- **Delete** : Click this option to delete a row in the grid.
- **Information** **:** Click this option to view the item(s) containing this nutrient in the right grid.

Nutrient: Use this field to specify the ID of nutrient selected via the lookup provided. This field is defaulted as soon as a Nutrient Template is selected. The lookup here obtains all the properties maintained via the *Material Property Master* screen.

Target: Use this field to maintain the target value of the respective Nutrient.

Max: Use this field to specify the maximum value of the nutrient to be present in the formula. The value is defaulted from the *Default Setup* screen or otherwise calculated on the basis of minimum value as per the percentage specified in *Default Max Value % to Min Value* field at *Default Setup* screen.

Item Containing Selected Nutrient Section

This section displays all the items which contain the nutrient selected in *Nutrients* section.

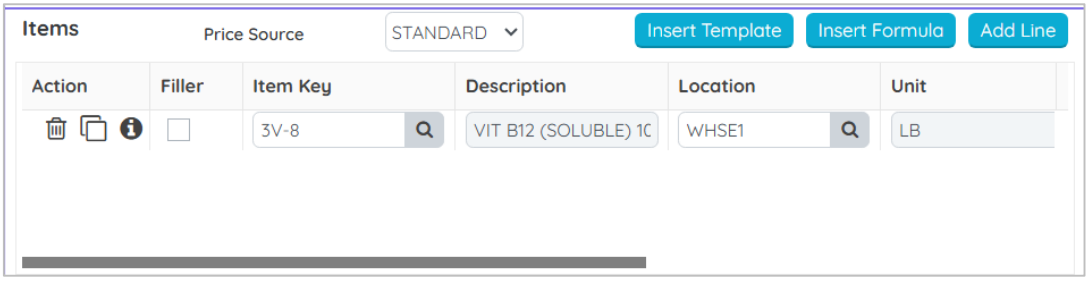
Item-Lot: This field displays the Item Key of the item which contains the selected Nutrient. This is a read-only field.

Description: This field displays description of the respective item. This is a read-only field.

Value: This field displays the selected nutrient's value in the respective item. This is a read-only field.

Items Section

Use this section to input items relevant to your formula. Select the price source from which the item cost will be retrieved. Set minimum and maximum cost values for each item to ensure the nutrients remain within an acceptable range. These values can act as constraints within which the item's nutrient value is to be considered valid. For example, the minimum value could represent a baseline that the nutrients should not fall below, while the maximum value could act as an upper limit to prevent exceeding a certain threshold value. By defining these ranges, you can ensure that the nutrient values remain within expected or acceptable limits.



Insert Template Button: Click this button to select an Item Template. On clicking *Insert Template* button, the system displays *Item Template* lookup window showing all the maintained Item Templates.

On selecting item template key, the system obtains all the items of the selected template and add them in the grid. If you have already selected an Item Template or added items manually then the system appends new item only.

Insert Formula Button: Click this button to select a formula. On clicking *Insert Formula* button, the system displays a lookup window showing all the maintained formulas. After selecting a formula, the system fetch all the items of the selected formula and add them in grid. If you have already added items in the grid then the system append these new items without removing the existing ones.

Price Source: Use this field to select the Price Source for all the raw materials and Packaging Materials. The system fetch the default price source selected at *Advanced Formulation Setup* screen. If required, you can change the price source. The available options in the dropdown are

- **Standard**
- **Market**
- **Average**
- **Last**
- **User Defined**

Add Line: Click this button to add a row in the grid.

Action  **:** The following options are available:

Delete  : Click this button to delete a row in the grid.

Copy  : Click this button to view the alternate item.

Information  : Click this option to view the nutrients for this item key in the adjacent grid.

Filler: Mark this checkbox to add the filter item to the formula, if required.

Item Key: Use this field to select the items of the formula. If you have selected an option to create the formula based on Item Lot then this field caption changes to 'Item-Lot' and lookup here obtains Item-Lot combination in this field lookup.

Description: This field displays the selected item's description. This is a read-only field.

Location: The lookup here obtains the Item Location records of the selected item. This lookup is similar to the location lookup as available on the *Sales Order Entry* screen's line item tab and thus, have all the quantity columns that are shown in *Sales Order Entry's* location lookup.

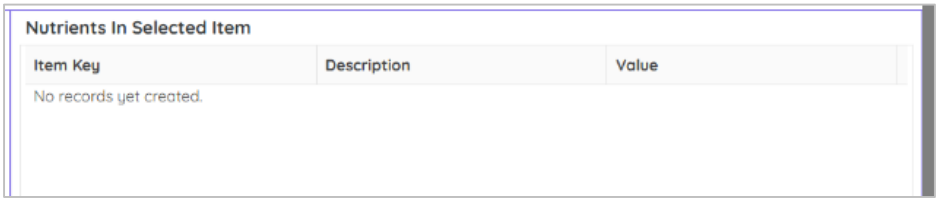
Unit: This field displays Stock Unit of the respective item. This is a read-only field.

Cost: This field displays the cost of the selected item. This is a read-only field.

Min: Use this field to maintain the minimum value of the respective Item in its stock unit.

Max: Use this field to maintain the maximum value of the Item in its stock unit. The value in this field depends upon the settings specified at the *Advanced Formulation Setup* screen. Firstly the system considers the maximum quantity specified at *Item Template* screen. If the item is added manually or the maximum quantity isn't specified at *Item Template* screen, the system fetch the default maximum quantity specified at the *Advanced Formulation Setup* screen. If default maximum quantity is not available then the system calculates the maximum quantity by applying the percentage specified at the *Default Max Value % to Min Value* field at the *Advanced Formulation Setup* screen. Maximum value is overridden by the On-Hand Quantity, would depend on the option chosen at the *Override Max Qty. with On-Hand* field at the *Advanced Formulation Setup* screen. If, due to any reason, the maximum quantity of an item found zero then, the system discards that Item/Item-Lot and thus, it won't become a part of the recommended formula.

Nutrients In Selected Item section



This section obtains all the nutrients of the items selected in the *Items* section.

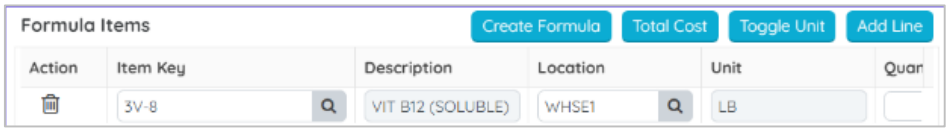
Item Key: This field displays Item key for the nutrient.

Description: This field displays description of the Item Key.

Value: This field displays value of the respective Nutrient in the selected item/Item-Lot.

Formula Items Section

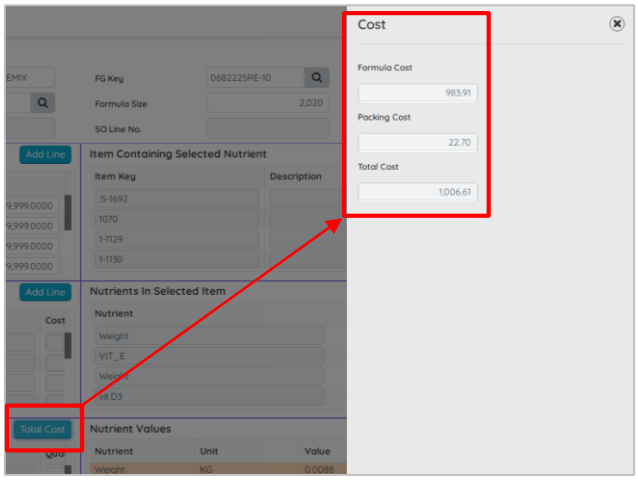
This section displays the system recommended formula. Here you can add new items, delete existing item(s) and modify item's quantity.



Create Formula: Click this button to create the formula based on item and nutrients maintained in the above grids. You can click as and when as per the items and nutrients maintained in the above grid fields. If you have made some changes in the formula and want to revert to the system recommended formula, click this button.

Total Cost: Click this button to view the *Formula Cost*, *Packing Cost* and *Total Cost*.

- **Formula Cost**: This field displays the total cost of all the raw materials. This is the sum total of *Value* field in the above *Formula Items* grid.
- **Packaging Cost**: This field displays the total cost of all the packing materials. The value in this field is defaulted from the *Packaging Material* screen.
- **Total Cost**: This field displays the total cost of all the materials. This is the sum total of *Formula Cost* and *Packaging Cost*. Say, for instance, here Formula Cost is 983.91, Packaging Cost is 22.70. The Total Cost is Formula Cost + Packaging Cost i.e., 983.91+22.70 = 1006.61 as shown below:



Toggle Unit: Click this button to toggle between stock and system unit.

Add Line: Click this button to add a row in the grid.

Action: The following options are available:

- **Delete**  **:** Click this button to delete a row in the grid.

Item Key/Item-Lot: This field specifies the Item Key of the respective item. The lookup here obtains all the items maintained in BatchMaster Web. However, if have opted to create the formula based on Item Lot then, this field caption changes to Item-Lot and displays the Item-Lot combination in the lookup as well.

Description: This field displays description of the Item key. This is a read-only field.

Location: The lookup here obtains the Item Location records of the selected item. This lookup is similar to the location lookup as available on the *Sales Order Entry* screen's line item tab and thus, have all the quantity columns that are shown in *Sales Order Entry's* location lookup. This is a read-only field.

Unit: This field displays Stock unit of the selected item key. This is a read-only field.

Quantity: This field specifies the quantity of the respective Item/Item-Lot. If required, you can modify the quantity in this field.

Item%: This field specifies the percentage of the respective Item/Item-Lot in the total formula. This is a read-only field.

Cost: This field defaults the cost of the selected item. The defaulted cost is based on the option selected in the *Price Source* field provided in the *Items* grid. This is a read-only field.

Value: This field displays the calculated value of the respective line item i.e., calculated by multiplying *Quantity* with *Cost*. This is a read-only field.

Nutrient Values Section

This section displays the Nutrient values of the created formula.

Nutrient Values — Within Range | Out of Range | Additional

Nutrient	Unit	Value	Min	Max
Biotin	KG	1.8000	1.8000	999999.0000
Dry Matter	KG	0.1791	0.0000	0.0000
vit. B12	KG	0.4540	0.4540	999999.0000
Weight	KG	0.0007	0.0000	2204.0000
Pant.Acid	KG	272.0874	272.0000	999999.0000

Nutrient: This field displays description of the property.

Unit: This field displays nutrient's unit of measurement.

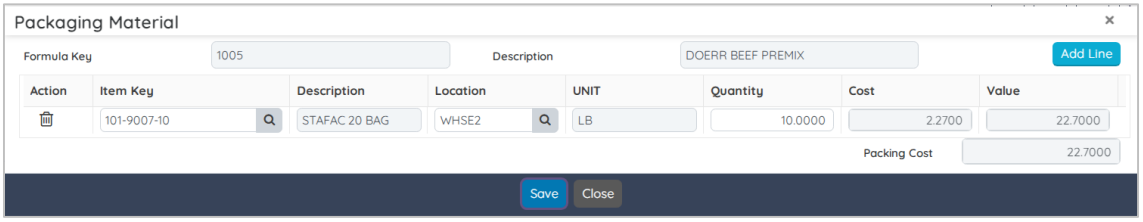
Value: This field displays the property's value in the created formula.

Min: This field displays minimum quantity of the nutrient property.

Max: This field displays maximum quantity of the nutrient property.

4.1.4 Special Functions

Packaging Material : Click this button to open the *Packaging Material* window where the materials to be used for packing the product which would be created using the respective formula.



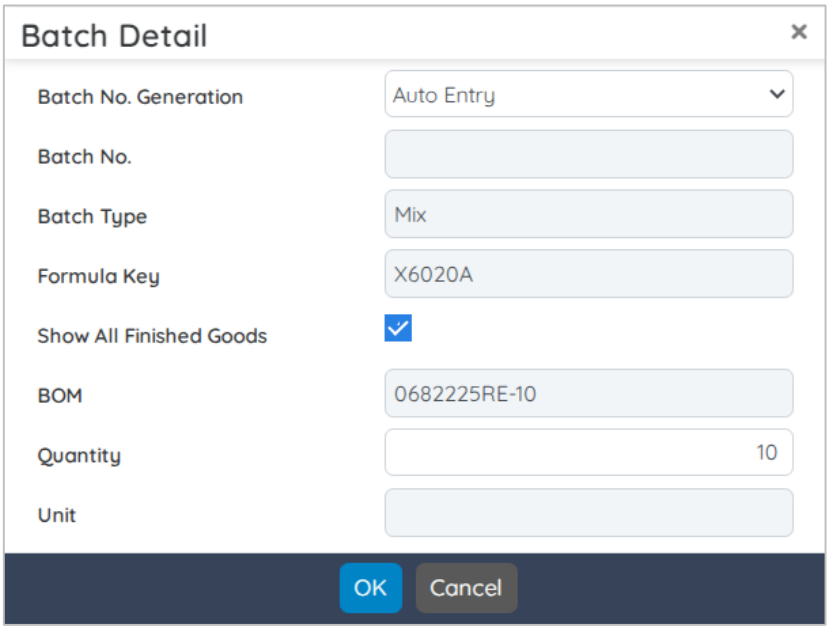
Transfer Formula : Click this button to transfer the finalized formula to standard *Formula Entry* screen. The formula is transferred with an *Active* status. If it is a new formula then, the revision number is 1. If it is an existing formula then the revision is the last available revision number of the formula + 1. On clicking Transfer Formula button, the system displays a success message as shown below:

BOM creation should done using standard *BOM Entry* screen after transferring the finalized formula to standard *Formula Entry* screen.

Create Batch : Click this button to create a batch, in Production, of the formula created. On clicking *Create Batch* button the system displays *Batch Details* screen.

If you have opted to create the formula based on lots then specific lots should be selected at the time of creating the formula. In this case, when you create the batch using this button, then these selected lots would automatically get assigned to the created batch and thus, the batch would be created with status as *Allocated*.

Once the formula has been finalized then you have to save the record and transfer the formula. You won't be able to create the batch without transferring the formula. If you click on *Create Batch* button without transferring the formula, system displays a message and do not open the *Batch Detail* screen.



Print Formula: Click this button to print the *Formula Solution Report* of the created formula showing the details of the record selected at *Advanced Formulation* screen.

4.2 Laboratory Utilities

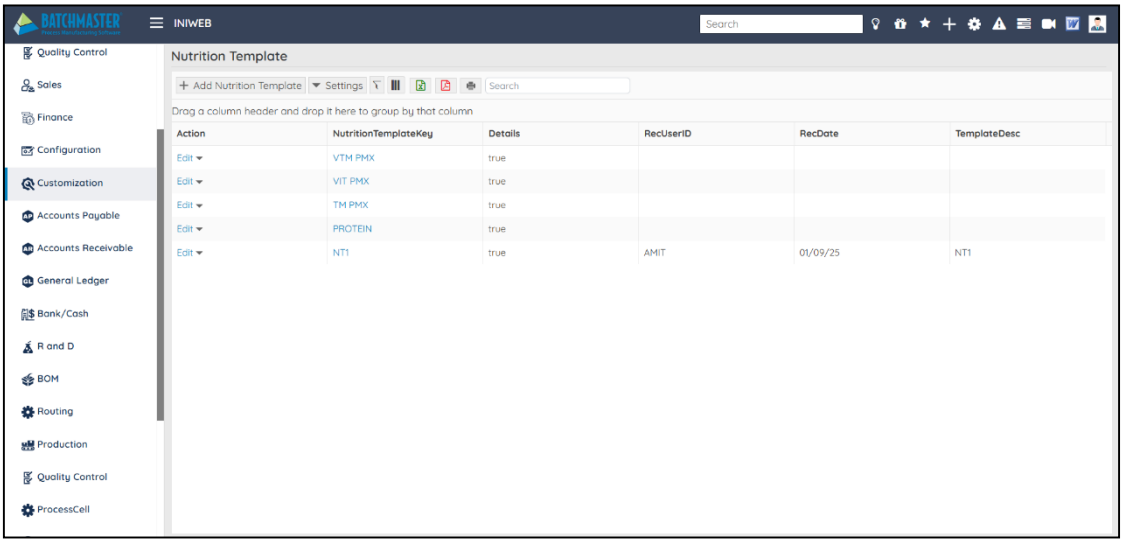
4.2.1 Nutrition Template

The *Nutrient Template* screen lets you define the desired Nutrient Template. The most important advantage of creating a Nutrient template is that the Nutrient combination does not have to be recreated each time it is used.

Go To: R and D → Laboratory Utilities → Nutrition Template.

4.2.1.1 Nutrition Template – Dashboard

You can manage nutrition templates from this dashboard. By default, the system displays all the existing nutrition template records as maintained for your business/company. You can click on any of the record to view its details.

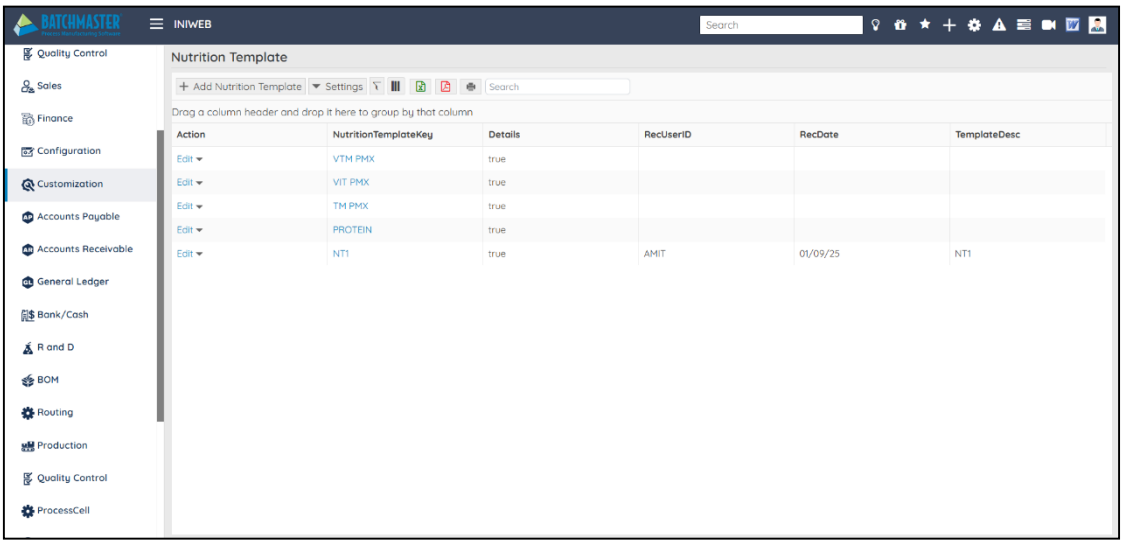


The *Nutrition Template* dashboard contains many elements that occupy 100% of the browser window. Resizing the window will resize the elements to fit. The elements can be rearranged, i.e. docked, resized, grouped, and stacked. The header and the side panel can't be rearranged.

Using the *Line Action* option from the dashboard you can:

- Edit an existing record to create new one
- Delete selected record(s)

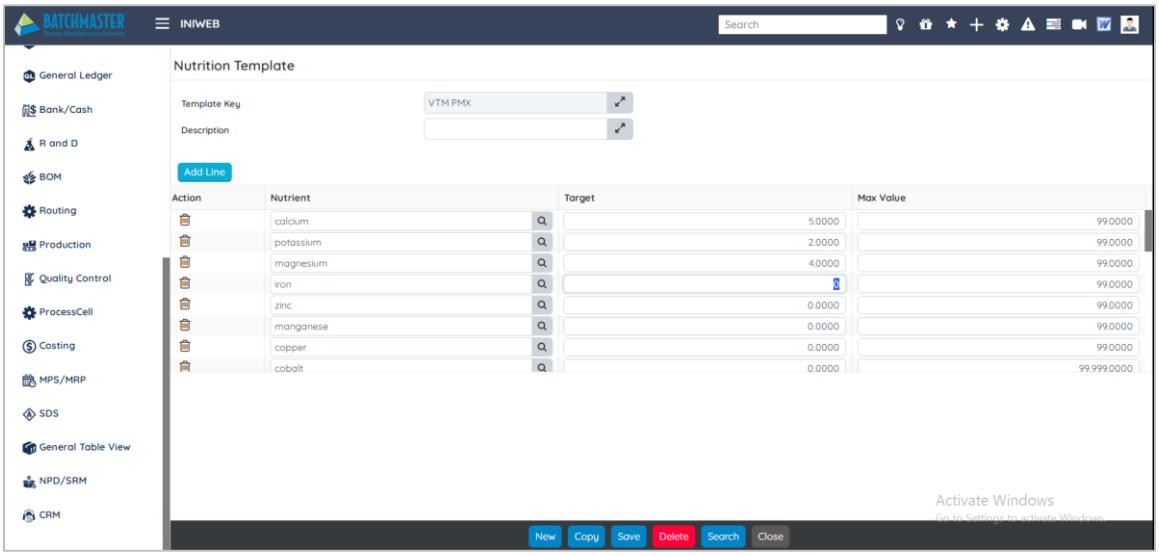
After you select all the columns of the *Nutrition Template* dashboard, the middle grid displays the selected columns.



The *Nutrition Template* dashboard provides a clear vision of the created records in a read-only mode. You can view the nutrition template records as per the number of items per page specified.

4.2.1.2 Nutrition Template Screen – Add Mode

To add a new nutrition template record to your BatchMaster WEB database, click the + *Add Nutrition Template* button. The system displays the *Nutrition Template* screen, where you can create a new record.



Screen Fields:

Template Key: Use this field to specify a template key that uniquely identifies the template.

Description: Use this field to specify the description for the template key. This is an optional field.

Grid:

Add Line: Click the *Add Line* button to add a line in the grid.

Action  **:** Click this button to delete a line from the grid.

Nutrient: Use this field to select a nutrient via the lookup provided. This is defaulted from the *Nutrient Master* screen.

Target: Use this field to specify target value of the nutrient.

Max Value: This field specifies the maximum value of the nutrient to be present in the formula.

4.2.1.3 Defining Nutrient Template

1. Open the *Nutrition Template* dashboard.

2. Click the +*Add Nutrition Template* button to open the *Nutrition Template* screen.
3. Enter the template key ID in the *Template Key* field.
4. Enter the description of the Template Key in the *Description* field.
5. Click the *Add Line* button to add a row in the grid.
6. Select a nutrient via the lookup next to the *Nutrition* Field.
7. Enter the target value of the nutrient in the *Target* field.
8. In the *Max Value* fields specify the maximum value of the nutrient to be present in the formula.
9. Repeat steps 5 to 7 if you want to add more nutrient values.
10. Click the Save button to save the record.

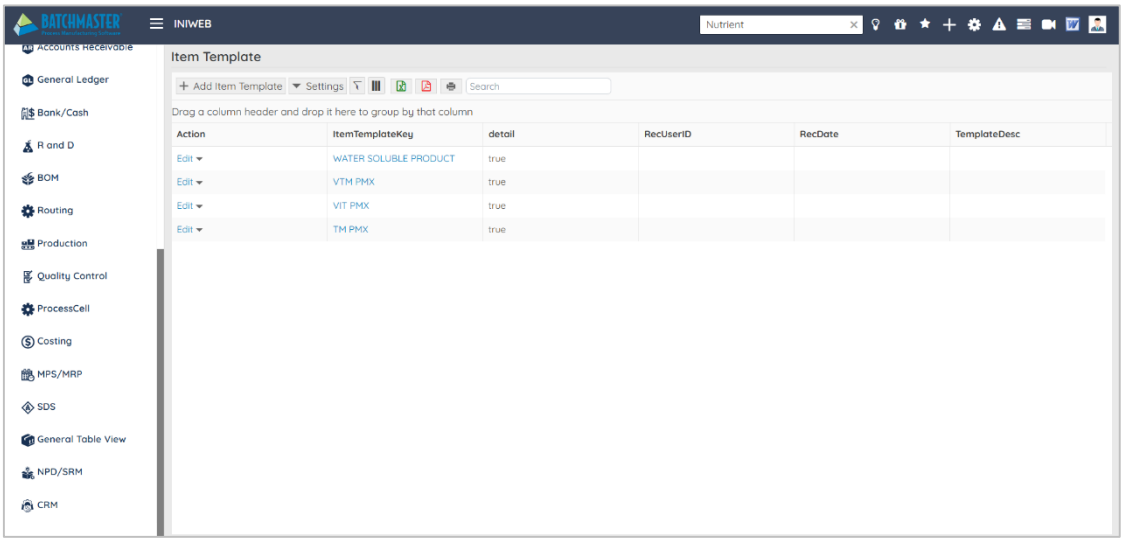
4.2.2 Item Template

The *Item Template* screen lets you define an Item Template. The most important advantage of creating an item template is that the Item combination does not have to be recreated each time it is used.

Go To: R and D → Laboratory Utilities → Item Template.

4.2.2.1 Item Template – Dashboard

You can manage item templates from this dashboard. By default, the system displays all the existing item template records as maintained for your business/company. You can click on any of the record to view its details.

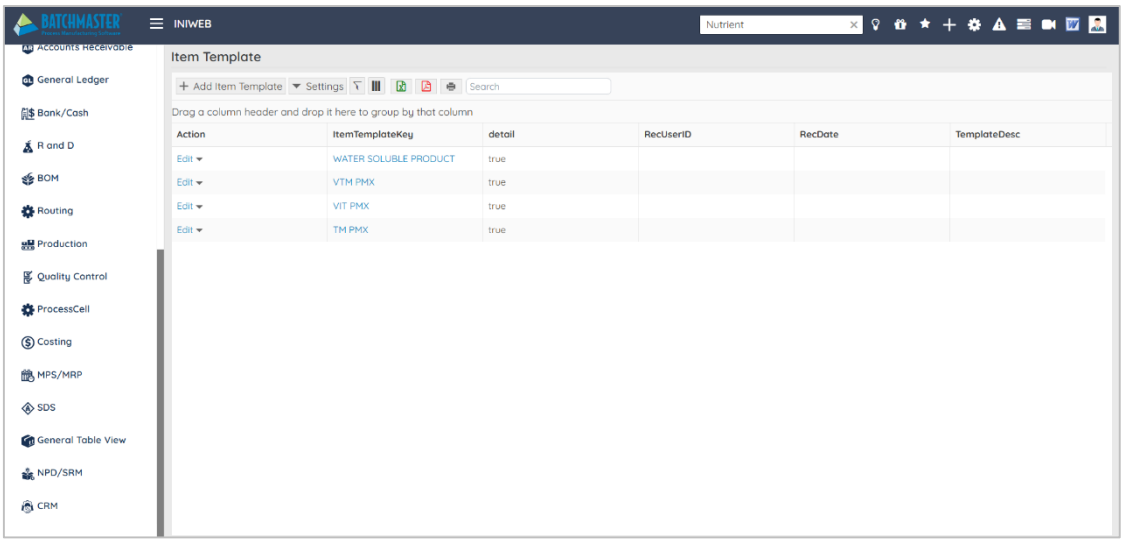


The *Item Template* dashboard contains many elements that occupy 100% of the browser window. Resizing the window will resize the elements to fit. The elements can be rearranged, i.e. docked, resized, grouped, and stacked. The header and the side panel can't be rearranged.

Using the *Line Action* option from the dashboard you can:

- Edit an existing record to create new one
- Delete selected record(s)

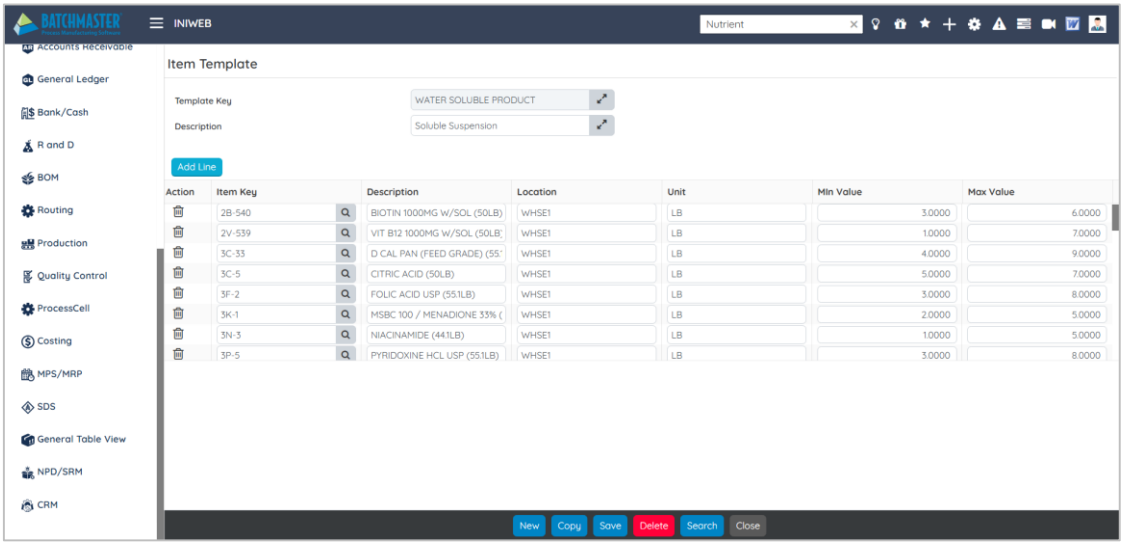
After you select all the columns of the *Item Template* dashboard, the middle grid displays the selected columns.



The *Item Template* dashboard provides a clear vision of the created records in a read-only mode. You can view the item template records as per the number of items per page specified.

4.2.2.2 Item Template Screen – Add Mode

To add a new Item template record to your BatchMaster Web database, click the + *Add Item Template* button. The system displays the *Item Template* screen, where you can create a new record.



Screen Fields:

Template Key: Use this field to specify the key that uniquely identifies the template, in which different Items are associated together.

Add Line: Click the *Add Line* button to add a line in the grid.

Grid:

Action : Click this button to delete a line from the grid.

Item Key: Use this field to specify the Item Key of the item to be included in the Template.

Description: This is the description of the Item. This field is defaulted as soon as an Item Key is selected.

Location: This is the Location of the Item. This field is defaulted as soon as an Item Key is selected.

Unit: This field displays stock unit of the item as selected in the *Item Key* field.

Min Value: Use this field to specify the minimum quantity of the Item to be present in the formula.

Max Value: Use this field to specify the maximum value of the item to be present in the formula. The value is defaulted from the *Default Setup* screen or otherwise calculated on the basis of minimum value as per the percentage specified in *Default Max Value % to Min Value* field on the *Advanced Formulation Setup* screen.

4.2.2.3 Defining Item Template Master

1. Open the *Item Template* dashboard.
2. Click the *+Add Item Template* button to open the *Item Template* screen.
3. Enter a unique identification key in the *Template Key* field.
4. Enter the description of the template key in the *Description* field.
5. Click the *Add Line* button to insert a row in the grid.
6. Select the Item key Id, to be attached to the template using the lookup next to the *Item Key* field.
7. Enter the value of the minimum and maximum range of the item's quantity which you want to be present in the formula in the *Min Value* and *Max Value* fields.
8. Repeat step 5 to 7 if you want to add more items.
9. Click the *Save* button to save the item-template record.

4.2.3 Advanced Formulation Setup

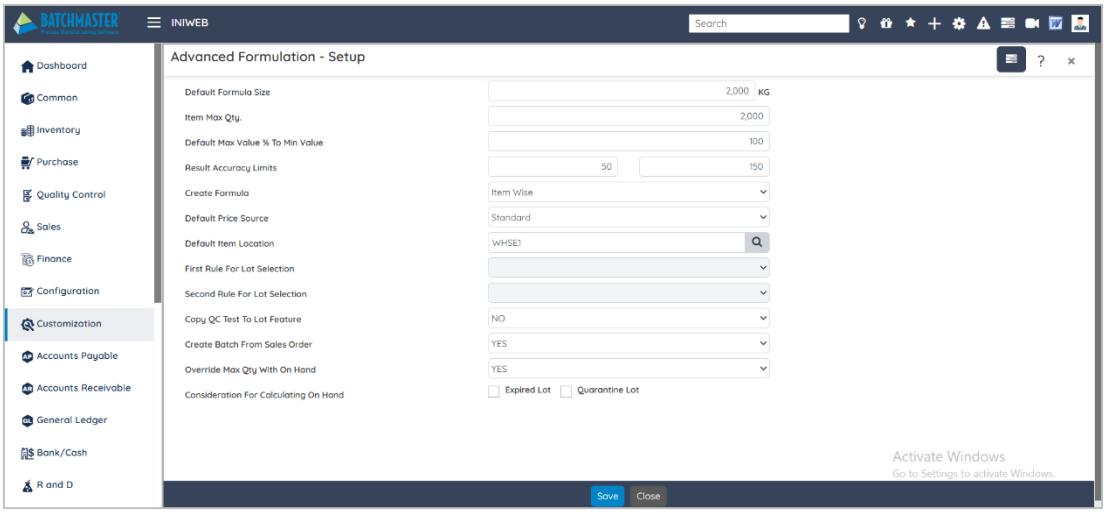
The *Advanced Formulation Setup* screen lets you specify default parameters to configure for the advanced formulation. Here you can define key settings and preferences that govern how advanced formulation is managed and processed within the system. On this screen, you can adjust default values, specify necessary rules, and manage other configuration options that streamline the advanced formulation workflow. The *Advanced Formulation Setup* screen provides an easy interface to modify these settings, allowing you to set up custom adjustments as per your business requirements.

 The *Item Template* and *Nutrient Template* screens are the master screens where you add the data manually. System won't fetch any data on these screens from the *Advanced Formulation Setup* screen. (Example, Max Item Quantity won't be fetched) and the settings done at *Advanced Formulation Setup* won't have any impact on the *Item Template* and *Nutrient Template* screens.

Go To: R and D → Laboratory Utilities → Item Template.

4.2.3.1 Advanced Formulation Setup Screen – Add Mode

To maintain default parameters, click the *Advanced Formulation* option from the main menu. The system displays the *Advanced Formulation – Setup* screen.



Screen Fields:

Default Formula Size: This field lets you specify the default formula size. This default formula size you maintain here defaults to the *Advanced Formulation* Screen. The unit of measure for default formula size displays next to the field.

Item Max Qty.: Use this field to set the default maximum quantity for an item. This Quantity will be defaulted to the *Max Value* field of the *Item Template* screen. Additionally, this quantity will be defaulted to the *Items* of the *Advanced Formulation* screen if you add a new line.

At the *Advanced Formulation* screen, when you add an item either manually or by selecting an Item Template, the system utilize the quantity you maintain here. However, if you have added an item by selecting an *Item Template* and already set the maximum value of the item at the *Item Template* screen. The system discard the value you maintain here and utilize the maximum quantity set at *Item Template* screen.

Default Max Value % To Min Value: Use this field to specify the percentage using which maximum value should be calculated by the system. When you add an item or nutrient at the *Advanced Formulation* screen, the system calculates the maximum quantity or value of that Item/Nutrient by applying the specified percentage on minimum quantity/value. However, the calculated maximum

quantity/value is the default value and editable. Also, if you maintain the item maximum quantity in this field then system use that value and discards the calculation of the maximum quantity by applying this percentage on the basis of the minimum quantity

This field is used only when *Item Max. Qty.* is left zero. The percentage specified in this field calculates the maximum quantity based on the minimum quantity. When you add a new line on any of the screens; *Item Template, Nutrition Template,* Item template of the *Advanced Formulation* screen, then on entering the Min Value the Max Value will automatically increase according to this percentage.

Result Accuracy Limits: Use these fields to specify the acceptable deviation over the boundary values of items and nutrients. Lower limit is applicable on minimum quantity/value and upper limit is applicable on maximum quantity/value. If the result comes within the acceptable range then that item/nutrient would be considered to be within the range and highlighted in green color.

Say, for example, minimum value of a nutrient is 20, and Maximum of nutrient is 22. The result accuracy limits are between 99.90 and 100.10. Thus, the acceptable range would be 19.98 to 22.022. In this case, if the result comes out to be 19.99 then the system considers it to be within the range. Whereas, if the result comes out to be 19.97 then system considers this as out of range.

Create Formula: The available options for create formula are *Item Wise* or *Item Lot Wise*.

- **Item Wise**: If you select this option then the system use the item level property values set at the *Material Property* screen to calculate the required quantity of the raw materials.
- **Item Lot Wise**: If you select this option then the system use the lot level property values to calculate the required quantity of the raw materials. However, if you maintain the lot level property values through the Lot Feature. Apart from this, if this option is selected then the caption of the *Item Key* field change to *Item Lot* in the *Items* and Formula Items grids of *Advanced Formulation* screen. Also, in this case, system displays “Item Key-Lot No.” in this field and displays the existing Lots in the lookup.

Default Price Source: Use this field to set the default Price Source to be fetched by the system when you an item at the *Advanced Formulation* screen. Once you click the drop down, the following options will be available:

- Standard
- Market

- Average
- Last
- Lot Cost

Default Item Location: This field lets you specify the Default Item Location associated with the Item. The Location specified in this field will be defaulted on the *Advanced Formulation* screen in the *Item* grid once the Item is selected.

First Rule For Lot Selection: This field is enabled when you select the option *Item Lot Wise* for the above *Create Formula* field. The available options in the dropdown are *Least Cost* or *Lot Issue Method*. The system utilize the first rule for short listing the lots from the available ones and if more than one lot gets short listed then the second rule (selected in the next setting) is applicable. The *Least Cost* signifies that the system select those lots that results in the least possible total cost and the Lot Issue Method rule signifies that the system select the lots based on the *Auto Lot Issue Method* specified for the item at the *Item Master* screen.

Second Rule For Lot Selection: This field is enabled only when you select the option *Item Lot Wise* for the above *Create Formula* field. The available options in the dropdown are *Least Cost* and *Lot Issue Method*. The system considers the second rule on the lots short listed through first rule i.e., *First Rule For Lot Selection*. The system restricts you to select the same option against First *Rule for Lot Selection* and *Second Rule for Lot Selection*. Thus, if you select the option *Least Cost* as the first rule then you have to mandatorily select this option as *Lot Issue Method*.

If you have opted to create the formula based on Items then, the system obtain the single rule of creating the formula with least total cost. Whereas, if you have opted to create the formula based on lots then two rules (i.e., Least Cost, and Lot Issue Method) are applicable and you have the option to choose the sequence in which these rules should be applied. You can set this sequence by selecting the first and second rule for Lot selection.

Copy QC Test To Lot Feature: This field is enabled only when you select the *Item Lot Wise* option for the above *Create Formula* field. The available options in the dropdown are *YES* or *NO*. If you select the option as YES, then the system copy the results of QC tests as lot features to the tested lot. If you select the option as NO, the system don't copy the test results.

Create Batch From Sales Order: Select one of the option using the dropdown next to the field. The available options in the dropdown are *YES* or *NO*. If you select *YES*, a button labeled as *Nutrient*

Template appear on the special functions of the *Sales Order Entry* screen. If you select *NO*, the Nutrient Template button disappear from the *Sales Order Entry* screen.

Override Max Qty With On Hand: Select one of the option using the dropdown next to the field. The available options in the dropdown are *YES* or *NO*. At the *Advanced Formulation* screen, Item's maximum quantity depends on the option selected for this setting. If you select *No*, then the system displays the maximum quantity set for the item (i.e. the maximum quantity set either at *Item Template* screen or at the *Advanced Formulation Setup*. If you select *No*, then system compares the available quantity of the respective Item/Item-Lot with the Maximum quantity of that item and if the available quantity is less than the maximum quantity then, the system displays the available quantity of the Item/Item-Lot in the *Max Quantity* field. But, if the available quantity is more than the maximum quantity then system excludes the override and displays the defined maximum quantity.

Consideration for calculating On Hand:

- **Expired Lot**: If checked, then expired lot quantity will be added in calculating on-hand quantity.
- **Quarantine Lot**: If checked, then quarantine lot quantity will be added in calculating On-hand quantity.

If you select the option *YES* in the *Copy QC Test to Lot Feature* field, then as soon as you close a QC document, the system will copy the results of the QC Test as the Lot Feature value for the lots whose QC was performed. Eventually, the system also updates the values only for those features whose IDs are the same as QC test IDs.

Save: Click this button to save the changes that have been made.

4.2.3.2 Defining Advanced Formulation Setup

1. Open the *Advanced Formulation Setup* screen.
2. Enter the default size of the formula in the *Default Formula Size* field.
3. Enter or select the unit of measurement by using the lookup next to the *Unit* field.
4. Specify the maximum quantity of the items in the *Item Max Qty.* field.
5. Specify the range of percentage in the *Default Max Value % to Min Value* field if *Item Max Qty.* field value is NIL.

6. Specify the range of the accuracy limits in the *Result Accuracy Limits* fields.
7. Select one of the option using the dropdown next to the *Create Formula* field.
8. Select the *Default Price Source* as one of *Standard, Market, Average, Last* or *Lot Cost*.
9. Enter or select the Location in the *Default Item Location* field.
10. Specify the *First Rule For Lot Selection* and *Second Rule For Lot Selection*.
11. Specify *Copy QC Test To Lot Feature* option as *YES* or *NO.*
12. Specify *Create Batch From Sales Order* option as *YES* or *NO.*
13. Specify *Override Max Qty With On Hand* option as *YES* or *NO.*
14. Mark the appropriate checkbox for the *Consideration For Calculating On Hand*, as applicable.
15. Click the *Save* button to save the advanced formulation default settings.