



ORCHESTRA

OCloud Planning Production Practice Lab



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On Demand lab – Production #1

Objective: To be familiar with components of documents that are important for to producing beer

- View item in item master data
- View bill of materials
- Create a bill of materials for wort item already in inventory
- View bill of materials for green beer
- View bill of materials for finished good
- Viewing a production order
- Create relationship maps

Fields will be underlined: followed by what you type (ex. Name: Bill) or execute inside < > (ex. <Enter>)

View item in Item Master Data

Navigate to Modules>Inventory>Item Master Data and search

View the Item Master Data for a Wort Item

- Description: wort <Enter>
- Click on an item from the list <Choose>

View a few important fields for wort in the header area

- Item group – is set to “WIP: wort”
- Process type – is set to “brewing”
- Pack type – is set to “UoM – BBL”
- Brand – matches the item description

General tab

- Additional identifiers – a three letter short code matching the brand
- Manage item by: is always set to batches

Brand and Additional Identifier information should match the item's brand (ex: for Pale Ale wort, the Brand would be set to Pale Ale and the Additional Identifier may be something like PAL; for Amber Ale wort, the Brand would be Amber Ale and the Additional Identifier may be something like AMB).

Inventory data tab

- UoM name: is set to BBL for barrels
- The table lists the warehouse(s) this wort can be stored in and the volume of wort in stock, committed, ordered, and available



Planning data tab

- Order multiple - Identifies how many barrels in one batch of this wort. 100 indicates that 100 BBLs is standard.
- Lead time – Specifies how many days, hours, minutes it takes to create this wort before using it. Lead times are not often entered for wort items, but may be entered to reflect tank residency times for green beer, dry hop, or bright beer items.

Batches tab

- You need to track each batch you create individually to be able to track it back to production of this item. This lists the date & quantity of each batch in stock.

View Bill of Materials (BoM)

You want to see recipe for a wort item, this is the Bill of Materials.

There are two ways to view the Bill of Materials-

- A. From the 'Item Master Data' record
 1. Navigate to **Modules>Inventory>Item Master Data**
 2. Search for and view the Data record for a wort item
 3. Right click in the gray area and choose **Bill of Materials**
- B. From **Modules > Production > Bill of Materials**
 1. Product: W < Enter> to see a list of all wort recipes
 2. Click an item from the list <Choose>

Important fields to view header area

- BOM type: set to production
- X Quantity: How many barrels this recipe will yield
- To Whse: Where the beer is produced (Ex. BH01 is where the wort will be made)

Itemized list of components used to make the product (recipe)

- Type: The type of item you're using
- No.: The Orchestrated code associated with the item
- Description: What is the item name
- Quantity: Amount of each item it takes to create the X Quantity of this wort
- UoM: The unit of measure for that item
- From Whse: warehouse the item is stored in
- Issue method: set to manual when an item is batch managed or variance/loss is likely to occur



You can use the yellow arrow next to the item no. to 'drill down' into the item master data record for this ingredient

Versions button

Versions allow you to store multiple recipes for a single WIP item. EX: a 30BBL recipe does not scale exactly to a 60BBL recipe, Versions can be created for each recipe.

Edit a Bill of Materials for wort item already in inventory

You need to add an ingredient to a Bill of Materials and remove another one.

Navigate to Modules > Production > Item Master Data

1. Description: W<Enter>
2. Click an item from the list <Choose>
3. Right click in the gray area & select Bill of Materials

Bill of materials

1. In the No. field of the next open row, type RH <Tab>
2. Click any hop item and <Choose> or <Enter>
3. Enter a Quantity for each of the items. Any amount will do!
4. <Update>
5. Right click on any row and click <Delete Row>
6. <Update>
7. <OK> to close out of screen

View Bill of Materials for green beer

You want to view the 'recipe' for a green beer item.

Open a Bill of Materials from one of the following options:

- A. From the 'Item Master Data' record
 4. Navigate to Modules>Inventory>Item Master Data
 5. Search for and view the Data record for a green beer item
 6. Right click in the gray area and choose Bill of Materials
- B. From Modules > Production > Bill of Materials
 3. Product: GB < Enter> to see a list of all green beer recipes
 4. Click an item from the list <Choose>

Important fields in header area

- BOM type - is set to Production
- X Quantity - 1



- Warehouse - F99 (default)

You will change to the actual fermenter later, right now F99 is a 'place holder' until the actual production date

Important fields in the components table

- No. – wort item
- Quantity – 1 BBL

The X Quantity / component Quantity relationship is 1:1 since it takes 1 BBL of wort to produce 1 BBL of green beer regardless of our overall yield. This concept is applied to additional WIP steps as well.

View Bill of Materials for finished good

You want to see what packaging items go into a keg ½ BBL

Navigate to Modules > Inventory > Item Master Data

1. Description: *keg <Enter>
2. Click any item from the list <Choose>
3. Right click in gray area and choose Bill of Materials

Important fields in header area

- BOM type – set to Production
- X Quantity - 1
- Warehouse - A1 (default)

The quantity of each item is a ratio of how much is needed per UoM of this finished good. In this case you are making a ½ keg, so you need .5 BBL, 1 keg shell, 1 keg cap to make this Item.

Viewing a Production Order

Navigate to Modules>Production > Production order

1. From the toolbar, click the First Data Record (left) navigation arrow

Important fields in the production order

- Status -
 - o *Planned* – Shows BoM Items as committed in inventory but does not take them out of inventory. Also indicates that we are not ready to brew.
 - o *Released* – Items still committed in inventory and that we are ready for production.
 - o *Closed* – Takes BoM Items are taken out of inventory and puts the produced item into inventory. Indicates production is complete.
- Planned Quantity - How many of the items will be produced



- To Whse/Tank - Where the produced Item will be created/stored
- Components Tab – a copy of the Bill of Materials (BoM). You can change these items as needed without affecting the original BoM

Create Relationship Maps

You want to see how each of the documents are linked, or—in the case of an error—where the link is not made

Navigate to Modules>Inventory > Item Master Data

1. Description: *keg <Enter>
2. Click an item from the list <Enter>
3. Right click in the gray area and choose Bill of Materials
4. Right click in the gray area and choose Relationship Map

You can see that it took raw materials to make the wort > wort to make green beer > green beer to make bright beer > bright beer, keg shell, keg cap to make pale ale – keg ½ BBL

PdO Creation Wizard

Create Production Orders for 2 turns of Wort while only entering the information once using the PdO Creation Wizard.

Navigate to Modules > Production > Automation > PdO Creation Wizard

1. Item Code: W [Tab]
2. Click an item row to highlight
3. < Choose >
4. Turns: Set to '2'
5. ProdDate: Select today's date
6. DueDate: Select today's date
7. FromWhs: Click into the field, then click the Magnifying Glass. Choose A1
8. ToWhs: Click into the field, then click the Magnifying Glass. Choose BH01
9. < Preview >
10. 'Order Creation Preview' window opens (notice that there are 2 Production Order lines – one for each turn of Wort)
11. Batch#: Add a Batch Number

Note that the Status is set to Planned. You can change this to Released if your brewery does not work on an Approval process otherwise, see next step for how to easily Release PdOs for Production.

12. < Create > – The lines will clear one by one creating the Production Orders (PdO)



Build Production Run

Learn how to create an entire Production Run - from Wort to Bright Beer – using the Production Run feature in the PdO Creation Wizard.

Navigate to Modules > Production > Automation > PdO Creation Wizard

1. < Build Production Run >
2. Starting Item: W [Tab]
3. Click an item row to highlight < Choose >
4. Build Direction: Forward
5. Quantity (Turns): 2
6. Prod Date: 4 weeks ago from today*
7. < Outline Production Run >

* It's best practice to plan your production ahead of time, however for this Lab, we're backdating so we can process all steps today. In real life, the Prod Date would be your brew date.

'Order Batch Selection' screen opens up

8. Batch#: enter today's date with no spaces (ex. 01019) < Select >

The Batch# is auto populated based on other PdOs created for this brand -it selects the next available number. You can change this however. Only numbers in the Batch# field, letters in the Suffix field.

You return to the 'Build Production Run' screen. Moving left to right, go through each Production Order line to verify planning information

WORT

9. ProdDate: defaults to Prod Date you previously entered
10. DueDate: defaults to Prod Date you previously entered
11. FromWhs: Click in the field first, then click the Magnifying Glass. Choose A1
12. ToWhs: Click in the field first, then click the Magnifying Glass. Choose BH01

GREEN BEER

13. ProdDate: defaults to Prod Date you previously entered
14. DueDate: Has lead time built in so it's set out that number of days
15. FromWhs: Click in the field first, then click the Magnifying Glass. Choose BH01.
16. ToWhs: Click in the field first, then click the Magnifying Glass. Choose a Fermenter



BRIGHT BEER & Additional Steps

17. ProdDate: Same as Green Beer Due Date
18. DueDate: One day from Bright Beer's Prod Date
19. FromWhs: Click in the field first, then click the Magnifying Glass. Should default to match the ToWhs you selected for your Green Beer
20. ToWhs: Click in the field first, then click the Magnifying Glass. Choose a Bright Tank

Notice the Prod Date & Due Dates - these are based upon the Lead Time in the Item's Master Data record

21. < Add to Wiz >
22. Set All Status To: Released
23. < Preview >
 - a. Note the MastPNum. This links all your PdOs together
24. < Create > (wait for the PdO's to disappear)

< Cancel > to close Production Order Creation Wizard