USER GUIDE
TRACEABILITY WORKFLOW

Prepared for: Beer Canada
By NSF International

INTRODUCTION

Beer Canada takes great pride in fulfilling its mission of providing its members thoughtful leadership and strategic focus to grow the beer category and facilitate the commercial success of Canada's brewers. Insomuch, Beer Canada advocates on behalf of its members, works with governments, industry stakeholders, technical experts, and the public to improve the marketplace for beer.

Starting in July 2020, Canadian law will require all brewing companies that operate in Canada to maintain traceability records to trace foods one step back to the immediate supplier and one step forward to the immediate customer. Beer Canada has partnered with NSF International, a leading global food safety consultancy group, to develop this step-by-step guide that brewers can use to develop a compliant traceability system.

This guidance is intended for use by those individuals that would be responsible for implementing traceability into their companies brewing operations. The scope of this document is limited to the minimum traceability requirements needed to comply with the Safe Food for Canadians Regulations.

There are significant benefits that are associated with an effective traceability system. These include, improved supply chain management, improved brand reputation and risk reduction. Thus, there are numerous reasons why all brewers need to start thinking seriously about traceability.

This document and the included Excel workbook are meant to be reviewed in a sequential order. As you review, we encourage you to consider how the Excel tables could be adjusted to better reflect your company's unique brewing processes and business practices.

We hope you find this Guide useful. Should you have any questions regarding the information included in this document, please don't hesitate to reach out to Beer Canada for more support.

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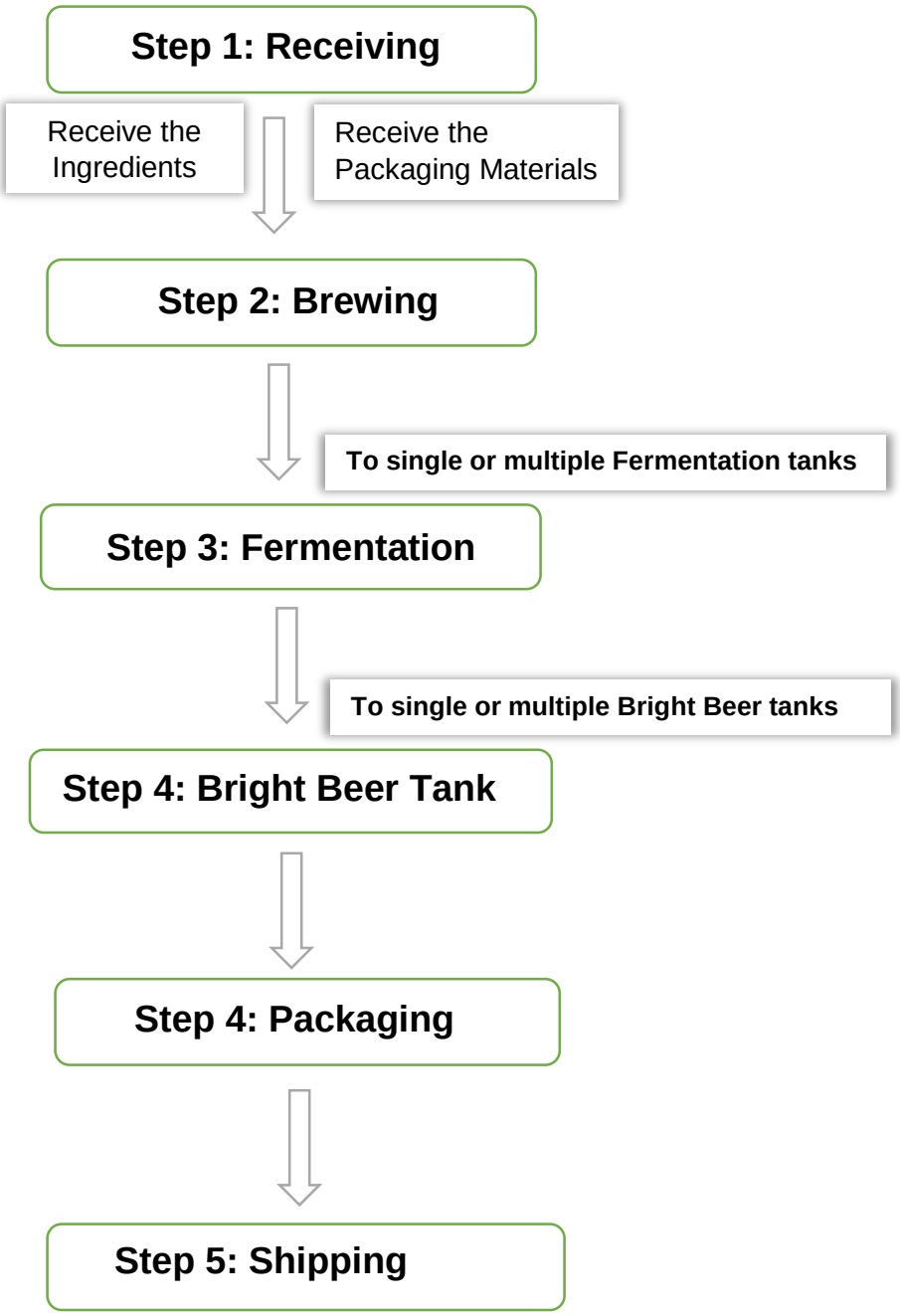
Traceability Workflow



Using the Traceability Workbook

A. Preparing the Workbook

This is a template workbook. Fields, naming convention and information being collected can be customized based on current business practices.

In completing this Workbook, it is advisable to use dropdown lists, instead of free text fields.

This Workbook is set-up with dynamic lists so additional items can be added to each category when needed and the choices will automatically appear in the dropdown choices for the category

- E.g. suppliers can be added in the list of suppliers and these will automatically appear in the dropdown choices for 'Suppliers' in the 'Receiving Raw Materials' tab.

To create lists, go to the 'DATA' tab

1. Create lists for
    - Packaging materials
    - Packaging suppliers
    - Ingredient suppliers
    - Ingredients
    - Fermentation Tank IDs
    - Bright Beer Tank IDs
    - Customer Names
    - Brand Names – if applicable
    - Customer location / Store numbers

2. Enter the name of the item and create an abbreviated version of the name
    - This is to streamline the resulting Traceability IDs (Tr ID) generated

INGREDIENTS	
Calcium Carbonate	CCA
Colour	CLR
Diamonnium Phosphate	DiP
Gypsum	GYP
Hops	HPS
Malt	MLT
Yeast Food	YST
Zinc Sulphate	ZNC

B. Mechanics of the Excel Workbook

1. Traceability Log # 3 (BREWING PRODUCTION LOG)

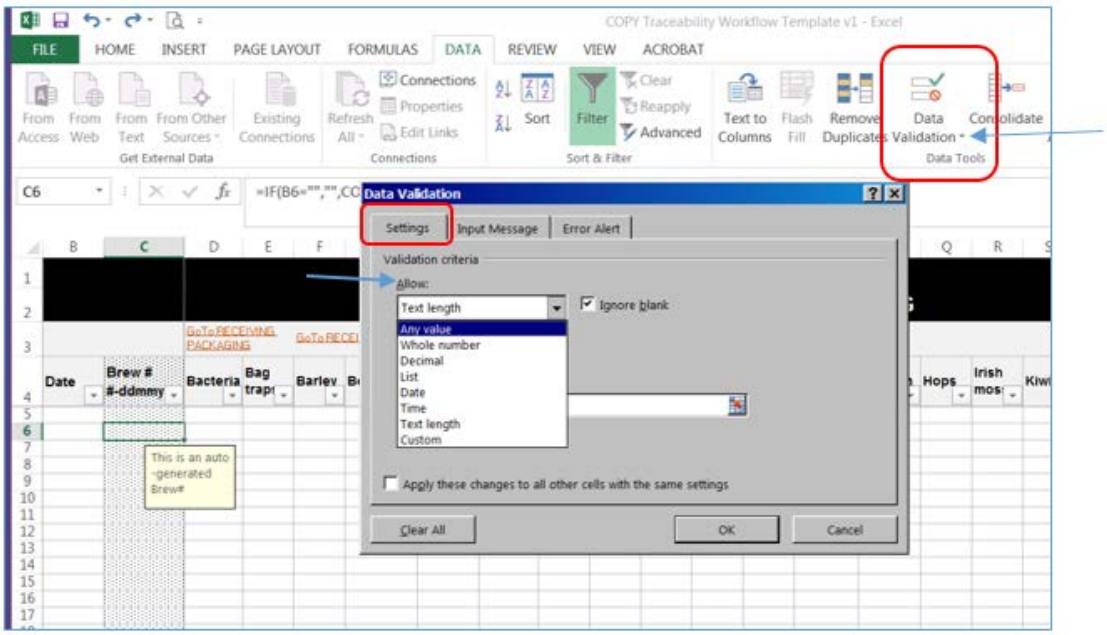
- The **Brew#** is an auto generated number based on the pre-loaded formula in **Column A**, which is hidden. To change the numbering system, unhide Column A and change the numbering system

- **Columns BA to BD** are also hidden columns. These are reference columns for the "**Brew#"** column in the "***Ferment to Shipping***" tab.

2. Traceability Log # 4 (FERMENTATION - BRIGHT BEER TANK - PACKAGING – SHIPPING)"

- This tab also has a "Brew# column (Column A)
- Brew numbers are pre-populated in this column from Traceability Log #3. There will be seven (7) rows per Brew number.

3. Cells with pre-loaded formulas are protected by a validation rule to prevent accidental erasure or deletions
   - The rule is set at **"Text length = 0** so that Excel will not allow you to type over the formula in these cells
   - The Brew# and all traceability numbers being generated are protected by this rule
   - If you wish to edit the formula in a protected cell,
     - Go to the '*Data Tools*' set on the upper Toolbar
     - Click on the small inverted triangle beside *Data Validation*
     - Select *Data Validation*
     - In the Settings tab, go to the *Allow* box and select "Any Value'



Following the Traceability Workflow

Step 1: Receiving

You will use the following tabs for this step:

A. Receiving Packaging Tab
B. Receiving Raw Materials Tab

A. Receiving Packaging Materials

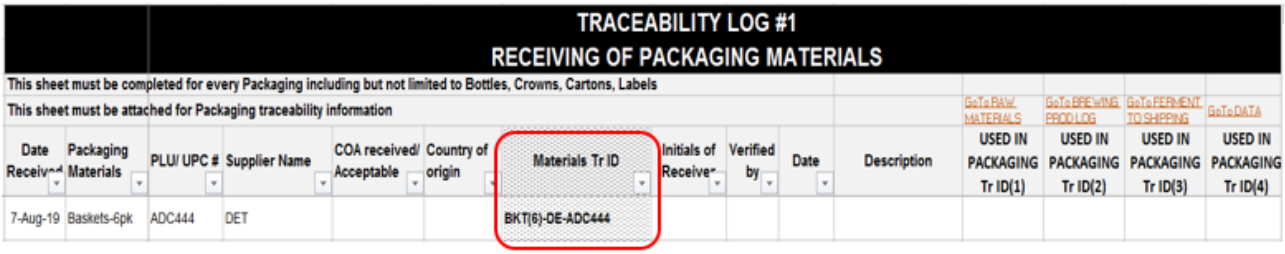
- This Log will track the packaging materials used in production
- This step will generate a unique ***Materials Tr ID***
  - i.e. Packaging Materials-Supplier-PLU/UPC#

Go to the 'RECEIVING PACKAGING' tab (Traceability Log #1)

1. Enter the following data:

- Date Received
- **Packaging Materials**– select from the Dropdown list
- **PLU / UPC#** - distinct number for the shipment of packaging materials
- **Supplier Name**
- Determine whether the shipment is Acceptable – select from the Dropdown list
- Country of Origin
- Initials of Receiver
- Date verified
- Description – if you need to further describe the packaging material

Please note: You need to select the Packaging Material + PLU/UPC# + Supplier name to create the Material Tr ID. Otherwise, you will see an error in Column G



TRACEABILITY LOG #1 RECEIVING OF PACKAGING MATERIALS														
This sheet must be completed for every Packaging including but not limited to Bottles, Crowns, Cartons, Labels														
This sheet must be attached for Packaging traceability information											GoTo RAW MATERIALS	GoTo BREWING PROD LOG	GoTo FERMENT TO SHIPPING	GoTo DATA
Date Received	Packaging Materials	PLU/ UPC #	Supplier Name	COA received/ Acceptable	Country of origin	Materials Tr ID	Initials of Receiver	Verified by	Date	Description	USED IN PACKAGING Tr ID(1)	USED IN PACKAGING Tr ID(2)	USED IN PACKAGING Tr ID(3)	USED IN PACKAGING Tr ID(4)
7-Aug-19	Baskets-6pk	ADC444	DET			BKT(6)-DE-ADC444								

2. If a verification step is completed, enter the information in the “Verified By” and “Date” columns

3. Once the materials were used in the Packaging Step, go back to this Spreadsheet to add the ***Packaging Tr IDs***

4. There are navigation links so the User can easily navigate through the different tabs of this Workbook

5. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

Step 1: Receiving

B. Receiving Raw Materials

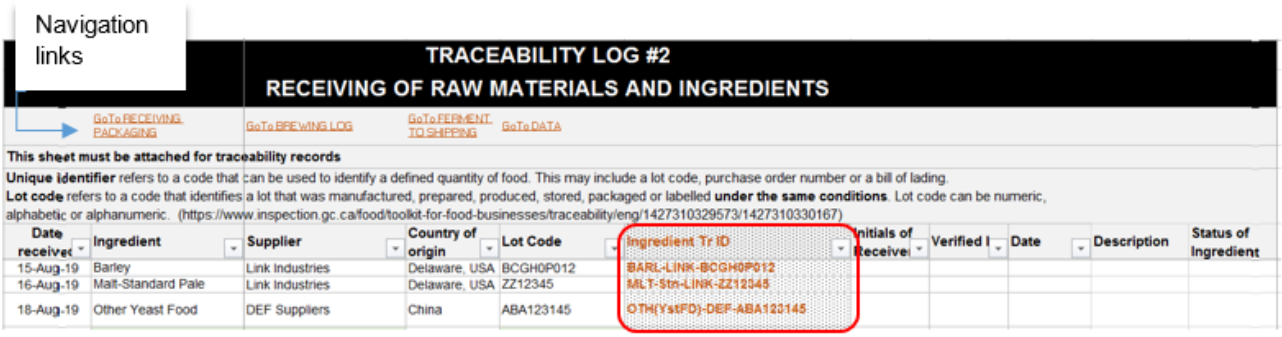
- This Log will track the raw materials and ingredients used in production
- This step will generate a unique ***Ingredients Tr ID***
  - i.e. Abbreviated name-Supplier-Lot code

Go to the 'RECEIVING RAW MATERIALS' tab (Traceability Log #2)

1. Enter the following data:

   - Date received
   - * **Ingredients** – Select from the Dropdown list
   - ** **Supplier** - Select from the Dropdown list
   - Country of Origin
   - ***** **Lot code** – specific for the shipment/batch of ingredients received
   - Initials of Receiver
   - Description - further describe the Ingredients
   - Status of Ingredient – to describe what happened to ingredient (disposed, damaged)

Please note: You need to select the Ingredient + Supplier + Lot Code to create the Ingredient Tr ID. Otherwise, you will see an error in Column F



2. If a verification step is completed, enter the information in the "Verified By" and "Date" columns

3. There are navigation links so the User can navigate through the different tabs of this Workbook

4. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

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* Create the list of Ingredients in the 'Data' tab of the Workbook
** Create the list of Suppliers in the 'Data' tab of the Workbook
*** Lot code can be replaced by the existing terminology/naming convention used at the Brewery as long as it is specific to the batch of raw material or ingredient used

Step 2: Brewing

- This Log will trace the batch of brew(s) that the ingredient was used in
- This step will generate a unique ***Brew Tr ID***
  - i.e. Brew#-Date when brew was started
  - The ***Brew Tr ID*** is very important as this unique identifier will be used to trace the batch of brew from the brewing stage all the way to shipping.

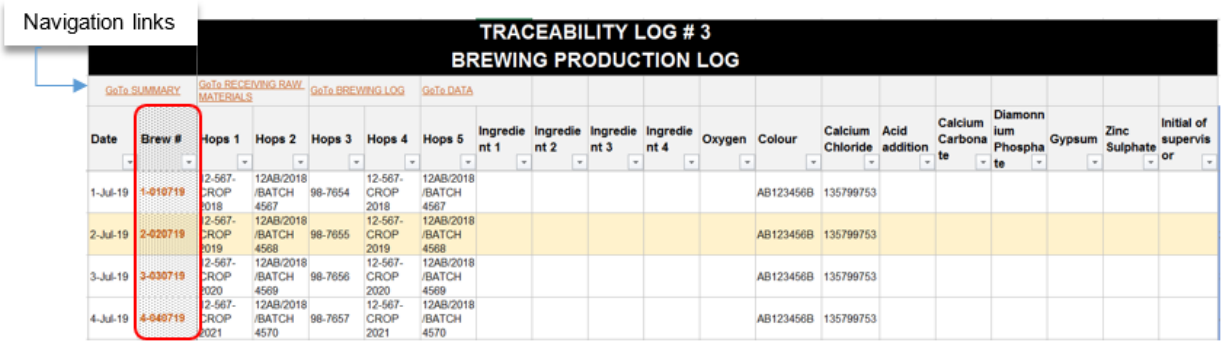
Go to the 'BREWING PRODUCTION LOG' tab (Traceability Log #3)

1. Enter the following data:

   - Date - when the brew was started. **Once a date is entered, a Brew# is generated**

   - ***Ingredients Tr ID*** of the raw materials/ingredients used (generated from Step 1(B): Receiving Raw Materials
     - This is a manual data entry step. Please ensure accuracy of the data
     - You can also copy and paste the Ingredients Tr ID by copying the data and pasting it as 'Text' only********

   - Accuracy of data entered can be confirmed by the Supervisor initials.



Date	Brew #	Hops 1	Hops 2	Hops 3	Hops 4	Hops 5	Ingredient 1	Ingredient 2	Ingredient 3	Ingredient 4	Oxygen	Colour	Calcium Chloride	Acid addition	Calcium Carbonate	Diamonnium Phosphate	Gypsum	Zinc Sulphate	Initial of supervisor
1-Jul-19	1-010719	12-567-CROP 2018	12AB/2018 /BATCH 4567	98-7654	12-567-CROP 2018	12AB/2018 /BATCH 4567						AB123456B	135799753						
2-Jul-19	2-020719	12-567-CROP 2019	12AB/2018 /BATCH 4568	98-7655	12-567-CROP 2019	12AB/2018 /BATCH 4568						AB123456B	135799753						
3-Jul-19	3-030719	12-567-CROP 2020	12AB/2018 /BATCH 4569	98-7656	12-567-CROP 2020	12AB/2018 /BATCH 4569						AB123456B	135799753						
4-Jul-19	4-040719	12-567-CROP 2021	12AB/2018 /BATCH 4570	98-7657	12-567-CROP 2021	12AB/2018 /BATCH 4570						AB123456B	135799753						

2. The Brew number is an auto-generated number. The naming convention can be customized, as long as each brew batch can be specifically identified

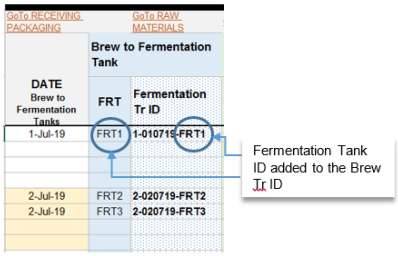
3. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

Notes:

- List of ingredients used can be customized to actual ingredients /raw materials used
- **** When you paste the data on the Brewing Production Log, on the Paste options, select 'Text' only

Step 3: Fermentation

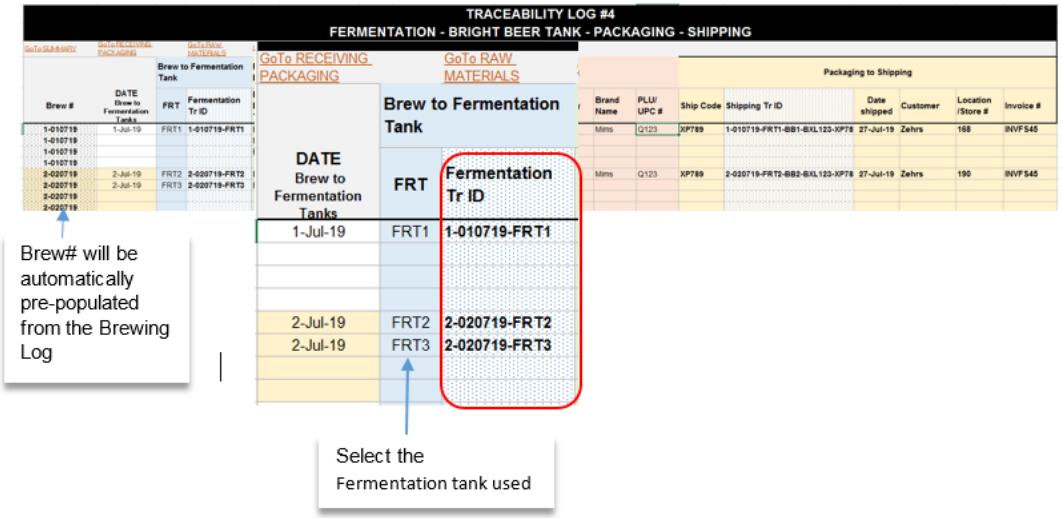
- This Log will trace the fermentation tank(s) a particular brew was transferred to
- This step will generate a unique ***Fermentation Tr ID***
  - At this stage, the unique identifier is modified so that the Fermentation Tank ID used is added to the ***Brew Tr ID***



Go to the 'FERMENT TO SHIPPING' tab (Traceability Log #4)

- **Traceability Log #4 will be used for Step 3: Fermentation to Step 5: Shipping**
- This Workbook is based on seven (7) Fermentation tanks. It can be modified to reflect the actual number of Fermentation tanks being used
- **The Brew Tr ID will carry over from the 'BREWING PRODUCTION LOG' tab**. Based on seven (7) Fermentation tanks, there are 7 rows for each Brew Tr ID
- The naming convention for the Fermentation tank can be modified to the existing practice at the Brewery.

1. Enter the following data:
   - Date - when the brew was transferred to the Fermentation tank
   - Select the Fermentation tank used
     - The Fermentation Tr ID will be based on the Fermentation tank used
     - Select as many Fermentation tanks, as applicable. It can be to a single or multiple tanks. Use one row for each tank used.



2. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

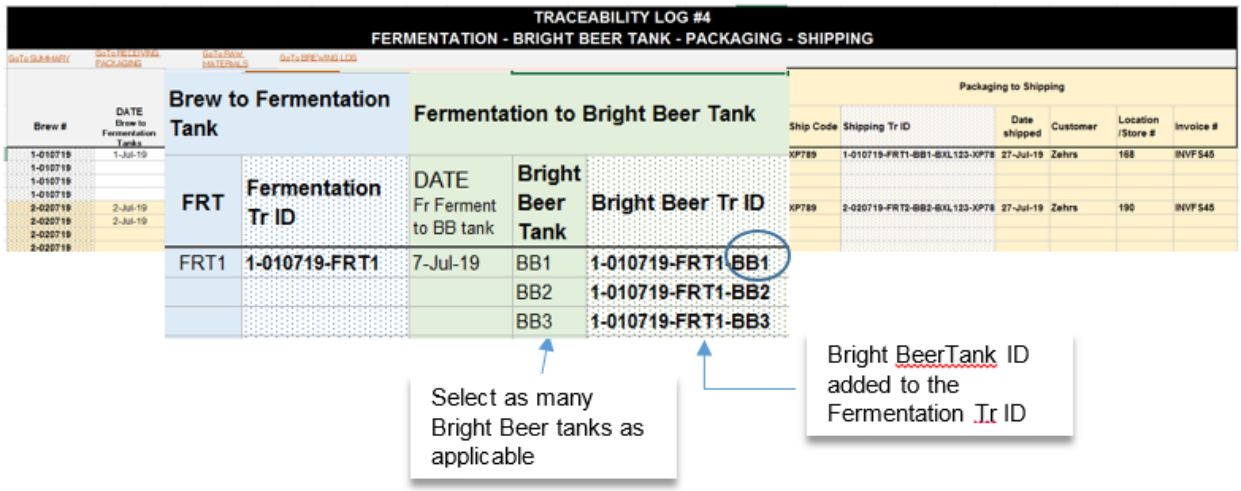
Step 4: Bright Beer Tank

- This Log will trace the transfer from the Fermentation tank(s) to the Bright Beer tank(s)
- This step will generate a unique ***Bright Beer Tr ID***
  - At this stage, the unique identifier is modified so that the Bright Beer Tank ID used is added to the ***Fermentation Tr ID***

Use the same 'FERMENT TO SHIPPING' tab (Traceability Log #4)

1. Enter the following data:

   - Date - when the brew was transferred from the Fermentation tank to the Bright Beer tank(s)
   - Select the Bright Beer tank used
     - The Bright Beer Tr ID will be based on the Bright Beer tank used
     - Select as many Bright Beer tanks used. It can be to a single or multiple tanks. Use one row for each tank used.



2. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

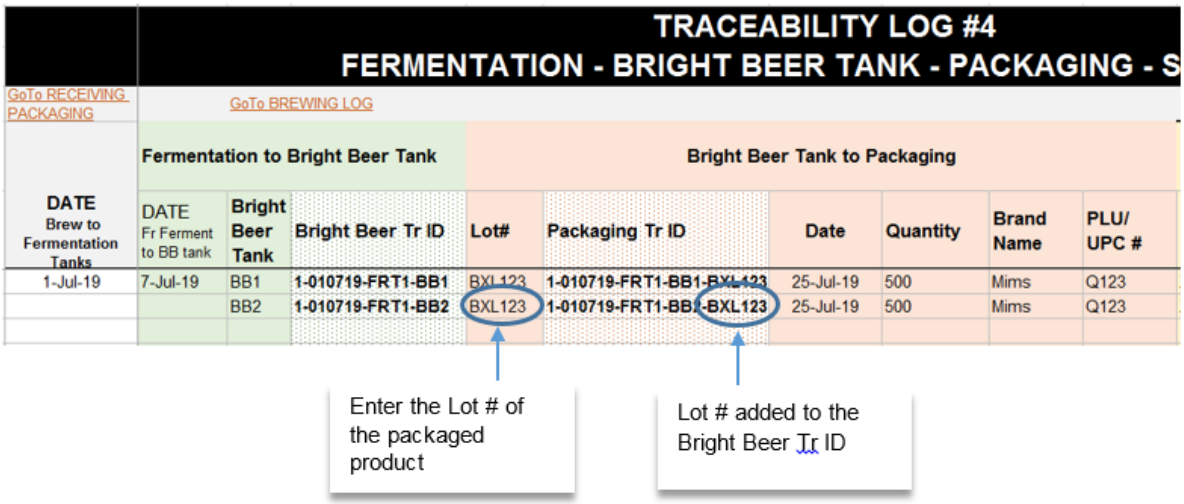
Step 5: Packaging

- This Log will trace the packaging of each Brew Tr ID by following their transfer from the Fermentation tank(s) to the Bright Beer tank(s) to the Packaging Lot#
- This step will generate a unique ***Packaging Tr ID***
  - At this stage, the unique identifier is modified so that the Packaging Tr ID used is added to the ***Bright Beer Tr ID***

Use the same 'FERMENT TO SHIPPING' tab (Traceability Log #4)

1. Enter the following data:

   - Enter the Lot # - You can use or modify the existing naming convention for each packaging batch
     - Enter a Packaging Lot# for product from **every** Bright Beer tank used
     - The target of this stage is to be able to trace the product from a particular bright beer tank to a packaging Lot#
     - This stage is important for a backward trace from the end user or shipping site
   - Date - when the batch from a particular Bright Beer tank was packaged
   - Quantity – number of packaged product from a particular Bright Beer tank
   - Brand name – in case the product is marketed under different brand names
   - PLU /UPC# - if this is different from the Lot #.



TRACEABILITY LOG #4
FERMENTATION - BRIGHT BEER TANK - PACKAGING - S

GoTo RECEIVING PACKAGING | GoTo BREWING LOG

DATE Brew to Fermentation Tanks	Fermentation to Bright Beer Tank			Bright Beer Tank to Packaging					
	DATE Fr Ferment to BB tank	Bright Beer Tank	Bright Beer Tr ID	Lot#	Packaging Tr ID	Date	Quantity	Brand Name	PLU/ UPC #
1-Jul-19	7-Jul-19	BB1	1-010719-FRT1-BB1	BXL123	1-010719-FRT1-BB1-BXL123	25-Jul-19	500	Mims	Q123
		BB2	1-010719-FRT1-BB2	BXL123	1-010719-FRT1-BB2-BXL123	25-Jul-19	500	Mims	Q123

Enter the Lot # of the packaged product

Lot # added to the Bright Beer Tr ID

2. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

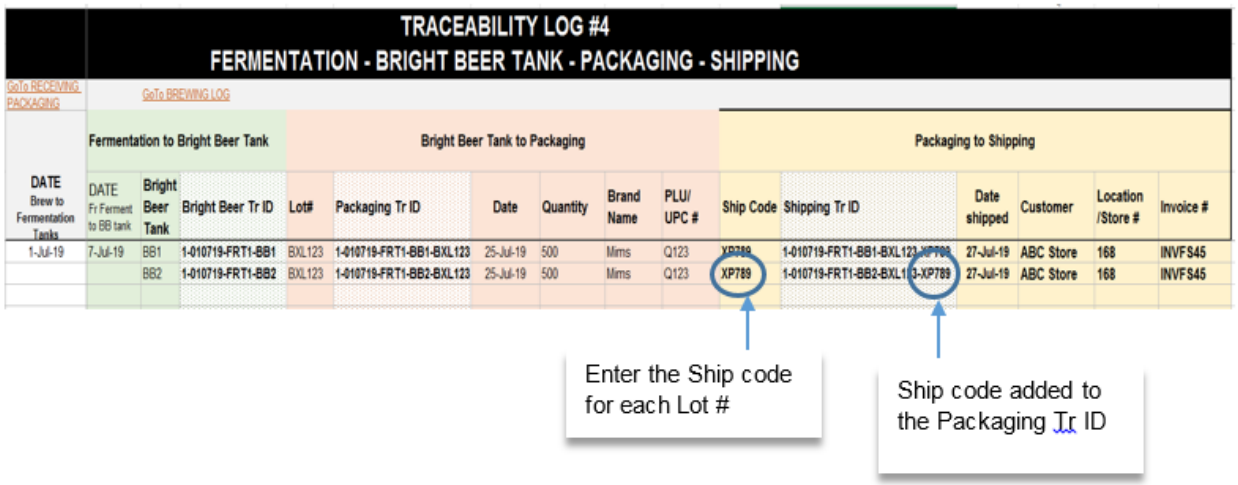
Step 6: Shipping

- This Log will trace the destination where a particular batch of packaged product was shipped to
- This step will generate a unique ***Shipping Tr ID***
  - At this stage, the unique identifier is modified so that the Shipping Tr ID is added to the ***Packaging Tr ID***

Use the same 'FERMENT TO SHIPPING' tab (Traceability Log #4)

1. Enter the following data:

   - Enter the Ship Code - You can use or modify the existing naming convention to identify each shipping batch
     - Enter a Ship Code for **every** Packaging Lot #
     - The target of this stage is to be able to trace where the product from a particular packaging batch was shipped to
     - This stage is important for a backward trace from the end user or shipping site
   - Date shipped
   - Customer name
   - Store location
   - Invoice number



TRACEABILITY LOG #4

FERMENTATION - BRIGHT BEER TANK - PACKAGING - SHIPPING

Go to RECEIVING PACKAGING | GoTo BREWING LOG

DATE Brew to Fermentation Tanks	Fermentation to Bright Beer Tank			Bright Beer Tank to Packaging						Packaging to Shipping					
	DATE Fr Ferment to BB tank	Bright Beer Tank	Bright Beer Tr ID	Lot#	Packaging Tr ID	Date	Quantity	Brand Name	PLU/ UPC #	Ship Code	Shipping Tr ID	Date shipped	Customer	Location /Store #	Invoice #
1-Jul-19	7-Jul-19	BB1	1-010719-FRT1-BB1	BXL123	1-010719-FRT1-BB1-BXL123	25-Jul-19	500	Mims	Q123	XP789	1-010719-FRT1-BB1-BXL123-XP789	27-Jul-19	ABC Store	168	INVFS45
		BB2	1-010719-FRT1-BB2	BXL123	1-010719-FRT1-BB2-BXL123	25-Jul-19	500	Mims	Q123	XP789	1-010719-FRT1-BB2-BXL123-XP789	27-Jul-19	ABC Store	168	INVFS45

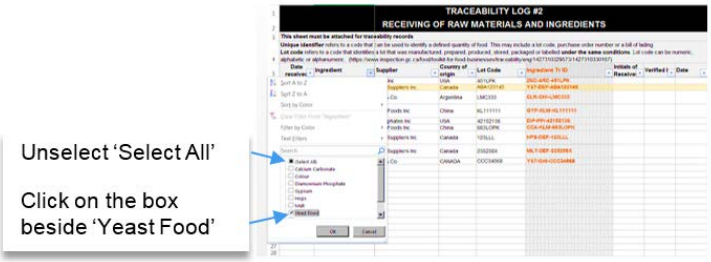
2. This worksheet **can be printed**. Information can be added on paper first, then entered into the Log electronically for a more efficient traceability process.

Tracing an Ingredient

A. Manual trace using Workbook tabs

Scenario: Recall of Yeast food product from DEF Suppliers Inc

1. Go to the “RECEIVING RAW MATERIALS” tab (Traceability Log#2)
2. Under “Ingredient” (Column B), filter for “Yeast Food”



3. Results will appear. Choose the specific Lot Code you’re looking for
   - In this scenario, it is Y***ST-DEF-ABA123145***. Keep note of or copy the ***Ingredient Tr ID***

TRACEABILITY LOG #2

RECEIVING OF RAW MATERIALS AND INGREDIENTS

This sheet must be attached for traceability records

Unique identifier refers to a code that can be used to identify a defined quantity of food. This may include a lot code, purchase order number or a bill of lading.
Lot code refers to a code that identifies a lot that was manufactured, prepared, produced, stored, packaged or labelled **under the same conditions**. Lot code can be numeric, alphabetic or alphanumeric. (https://www.inspection.gc.ca/food/toolkit-for-food-businesses/traceability/eng/1427310329573/1427310330167)

Date receivec	Ingredient	Supplier	Country of origin	Lot Code	Ingredient Tr ID	Initials of Receive	Verified I	Date
2-Jul-19	Yeast Food	DEF Suppliers Inc.	Canada	ABA123145	YST-DEF-ABA123145			
14-Jul-19	Yeast Food	GHI & Co.	CANADA	CCC34568	YST-GHI-CCC34568			

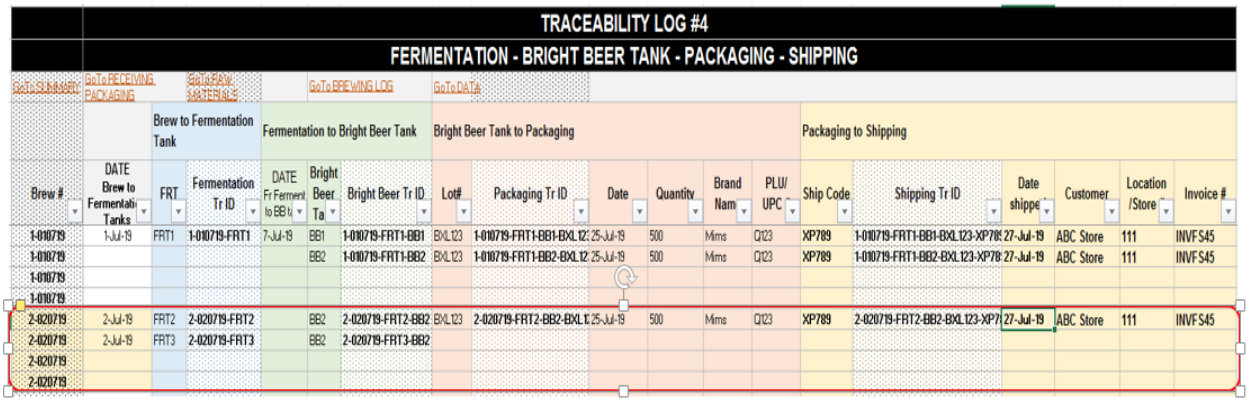
2. Go to the ‘BREWING PRODUCTION LOG’ tab (Traceability Log #3)
3. Look for the column for the particular ingredient. In this case, Column D
   - Search for the particular ***Ingredient Tr ID*** in Column D
   - In this scenario, this particular lot of yeast food was used in **Brew# 2-020719**

TRACEABILITY LOG # 3
BREWING PRODUCTION L

GoTo SUMMARY | GoTo RECEIVING PACKAGING | GoTo RECEIVING RAW MATERIALS | GoTo BREWING LOG | GoTo DATA

Date	Brew #	Yeast Food	Malt	Hops 1	Hops 2	Hops 3	Hops 4	Hops 5	Ingredient 1	Ingredient 2	Ingredient 3	Ingredient 4
1-Jul-19	1-010719	123456789	12345	12-567-CROP 2018	12AB/2018/BATCH 4567	98-7654	12-567-CROP 2018	12AB/2018/BATCH 4567				
2-Jul-19	2-020719	YST-DEF-ABA123145	12345	12-567-CROP 2019	12AB/2018/BATCH 4568	98-7655	12-567-CROP 2019	12AB/2018/BATCH 4568				
3-Jul-19	3-030719	34567890	12345	12-567-CROP 2020	12AB/2018/BATCH 4569	98-7656	12-567-CROP 2020	12AB/2018/BATCH 4569				

4. Go to ‘FERMENT TO SHIPPING’ tab (Traceability Log#4)



TRACEABILITY LOG #4

FERMENTATION - BRIGHT BEER TANK - PACKAGING - SHIPPING

GoTo SUMMARY | GoTo RECEIVING PACKAGING | GoTo RAW MATERIALS | GoTo BREWING LOG | GoTo DATA

	Brew to Fermentation Tank			Fermentation to Bright Beer Tank			Bright Beer Tank to Packaging						Packaging to Shipping					
Brew #	DATE Brew to Fermentati Tanks	FRT	Fermentation Tr ID	DATE Fr Ferment to BB Ta	Bright Beer Ta	Bright Beer Tr ID	Lot#	Packaging Tr ID	Date	Quantity	Brand Nam	PLU/ UPC	Ship Code	Shipping Tr ID	Date shippe	Customer	Location /Store	Invoice #
1-010719	1-Jul-19	FRT1	1-010719-FRT1	7-Jul-19	BB1	1-010719-FRT1-BB1	BXL123	1-010719-FRT1-BB1-BXL12	25-Jul-19	500	Mms	Q123	XP789	1-010719-FRT1-BB1-BXL123-XP78	27-Jul-19	ABC Store	111	INVFS45
1-010719					BB2	1-010719-FRT1-BB2	BXL123	1-010719-FRT1-BB2-BXL12	25-Jul-19	500	Mms	Q123	XP789	1-010719-FRT1-BB2-BXL123-XP78	27-Jul-19	ABC Store	111	INVFS45
1-010719																		
1-010719																		
2-020719	2-Jul-19	FRT2	2-020719-FRT2		BB2	2-020719-FRT2-BB2	BXL123	2-020719-FRT2-BB2-BXL1	25-Jul-19	500	Mms	Q123	XP789	2-020719-FRT2-BB2-BXL123-XP7	27-Jul-19	ABC Store	111	INVFS45
2-020719	2-Jul-19	FRT3	2-020719-FRT3		BB2	2-020719-FRT3-BB2												
2-020719																		
2-020719																		

- In this scenario, Brew# 2-020719 was transferred to Fermentation Tanks 2 & 3 (FRT2 & FRT3)
- Following this progression, contents of FRT2 & FRT3 were transferred to Bright Beer Tank 2 (BB2)
- Contents from BB2 were packaged under **Lot BXL123**
- And shipped under **Ship Code XP789**
- Shipped on July 27, to ABC Store, Store number 111, invoiced under INV-FS45.

B. Manual Backward trace

A backward trace will follow the same process, whether the trace starts at the end user (Shipping stage) or at any point after the brewing stage (Packaging to Bright Beer Tank to Fermentation stage).

Notes