

ENCOMPASS

Spirits Distillation Recipe Type

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This document explains how the 'Distillation' Recipe Type works and how to set up Distillation Recipes.

Problem Statement

The spirit production process includes distillation steps where fermented wash is distilled into the heads, hearts, and tails of a high-proof spirit. The number of times the wash is passed through the still may vary, but the end result is always a high-proof finished spirit (hearts) that will typically undergo further processing (barrel proofing or storage proofing) before packaging.

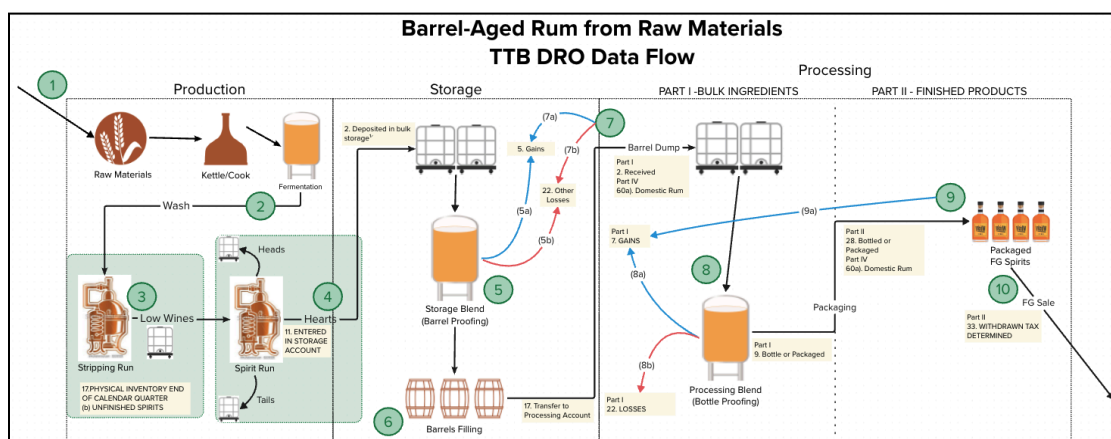
In this document we will focus on building Recipes for these spirit production steps:

- A) Distill Fermented Wash into Low Wines (Unfinished Spirits) in a Stripping Run
- B) Distill Low Wines into Hearts (Finished Spirits), Heads & Tails (Unfinished Spirits) in a Spirit Run.

The TTB DRO classifies the 'birth' of a spirit as occurring in the DRO Production Report, and the Hearts (Finished Spirits) are immediately passed through to the DRO Storage Report.

Example:

- Low ABV Fermented Rum Wash passes through a Stripping Run, creating Rum Low Wines (Unfinished Spirits) at 80 proof.
- The Rum Low Wines are passed through a Spirit Run, producing Rum Hearts (Finished Spirits) at 160 proof, along with Rum Heads & Tails (Unfinished Spirits).





The Solution

Introducing the 'Distillation' Recipe Type. The 'Distillation' Recipe Type is used by spirits producers who are creating spirits through the act of distillation.

Distillation type Recipes support distillation cuts, allowing the user to collect cuts of Heads, Hearts, & Tails in separate totes throughout the distillation process.

Using the 'Distillation' Recipe Type will ensure that:

- Distillation cuts of Heads, Hearts, and Tails can be produced and put into separate totes, matching real-life activity.
- Proof gallons from Hearts (Finished Spirits) created through distillation are reported on the DRO Production Report – Line 11. Entered in Storage Account & DRO Storage Report – Line 2. Deposited in Bulk Storage.
- Proof gallons from Low Wines, Heads, & Tails (Unfinished Spirits) created through distillation are reported on the DRO Production Report – Line 17. Physical Inventory End of Calendar Quarter (b) Unfinished Spirits.
- Proof gallons from the redistillation of Finished Spirits are reported on the DRO Processing Report – Line 17. Transferred to Production Account for Redistillation, and the DRO Production Report – Line 15. Received for Redistillation.
- Proof gallons from the redistillation of Unfinished Spirits are reported on the DRO Production Report – 17. Physical Inventory End of Calendar Quarter (a) Received for Redistillation.

How it Works

Pre-Recipe Build Setup

Production Stage Types:

The Production Stage Types Table is used to define the different types of distillation stages used at your facility. Distillation Recipes require the use of Production Stage Types with Stage Class = Spirits. Stage Class = Spirits enforces the collection of proof data when processing the PdO. The 'Stage Type' dropdown in Recipe Management will be auto-filtered down to only those Production Stage Types with Stage Class = Spirits.

Production Cut Types:

The Production Cut Types Table is used to define the types of distillation cuts you will be producing. Set up one record for each of the following cut types:



- Low Wines
- Heads
- Hearts
- Tails

Production Stage Types Cut Types:

The Production Stage Types Cut Types Table is a subtable of Production Cut Types that is used to link Production Stage Types to a Product Type that will be used to provide a list of possible Products when setting up distillation cuts in Distillation type Recipes. Here is the common setup that will be used:

Production Cut Types	Production Stage Type	Product Type
Low Wines	Distilling Stripping Run	WIP: Distilled Low Wines
Heads	Distilling Spirit Run	WIP: Distilled Heads
Hearts	Distilling Spirit Run	WIP: Distilled Hearts
Tails	Distilling Spirit Run	WIP: Distilled Tails

This setup will be referenced again when discussing how to set up distillation cuts when building a Distillation Recipe.

'Distillation' Recipe Build

Recipe Management

Search for anything...

Save Changes

QC

Recipe Version

4) Krill Rum Hearts Spirit Run

Product

4516 4) Krill Rum Hearts Full Strength

* Recipe Type

Distillation

* Location

Krill Brewing & Distilling

Production Partner

* Active

☒

* Planned Units

250

UoM

Gallons

* Proof

160

Laid-in Cost

\$5.08

Total Cost

\$1,270.66

Collapse All

Distilling Spirits Run

Byproducts Management

Delete

* Recipe Stage	* Stage Type	Sequence	* Planned Units	* Proof	UoM	Turnable	
Krill Rum Hearts Spirit Run	Distilling Spirits Run	1	250	160	Gallons	☒	
Lead Time	Transfer When Complete	Memo			Laid-In Cost	Total Cost	
8 Hours	☐				\$5.08	\$1,270.66	
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost	Total Cost
4514 3) Krill Rum Low Wines		800	Gallons	0 Minutes	0	\$1.59	\$1,270.66

Add Recipe Component

Add Instruction



The screenshot displays the 'Recipe Management' interface. At the top, there's a search bar and a 'Save Changes' button. Below, the recipe details for '4) Krill Rum Hearts Spirit Run' are shown, including 'Planned Units' (250), 'Product' (4516 4) Krill Rum Hearts Full Strength, 'UoM' (Gallons), 'Recipe Type' (Distillation), 'Location' (Krill Brewing & Distilling), 'Production Partner', and 'Active' status. A 'Byproducts Setup' dialog box is open, showing the 'Hearts' byproduct with 'Quantity' (250) and 'UoM' (Gallons). The dialog also lists 'Heads' and 'Tails' byproducts. The main interface also shows a table for 'Distilling Spirits Run' with columns for 'Recipe Stage', 'Lead Time', 'Product', 'Quantity', 'UoM', 'Turnable', 'Laid-In Cost', and 'Total Cost'.

Recipe Setup & Configuration:

- Distillation Recipes require the use of Production Stage Types with Stage Class = Spirits.
- 'Distillation' Recipes are single-stage recipes.
- Click the 'Byproducts Management' button to set up Distillation Cuts.
 - The Production Cut Types and Products available are based on the setup of Production Stage Types Cut Types previously mentioned.
- The Production Cut Types setup for 'Hearts' will likely match the output Product, Volume, and Unit of Measure on the Recipe, because this is the primary output from the Recipe.

'Distillation' Production Order Processing

1. Complete Lot Selection for inventory being consumed.



Production Processing Search for anything...

Edit Production Order **Log QC** **Batch Management** **Production Orders**

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4514 3) Krill Rum Low Wines	In Process	1/10/2024 12:22 PM				Gallons	250	0	160

Lot Selection

Product	Bin	Batch Code	Received Date	Exp Date	Quantity	Proof Gallons	Available Quantity	UoM	Proof
4514 3) Krill Rum Low Wines	Tote 173	Krill Rum 6228	1/9/2024	5/6/2024		0	35 Gallons	80	Consume
4514 3) Krill Rum Low Wines	Tote 306	Krill Rum-Demo	1/29/2024	5/18/2024	50	40.00	80 Gallons	80	Consume
4514 3) Krill Rum Low Wines	Tote 307	Krill Rum-Demo	1/29/2024	5/18/2024	250	200.00	250 Gallons	80	Consume
4514 3) Krill Rum Low Wines	Tote 308	Krill Rum-Demo	1/29/2024	5/18/2024	250	200.00	250 Gallons	80	Consume
4514 3) Krill Rum Low Wines	Tote 309	Krill Rum-Demo	1/29/2024	5/18/2024	250	200.00	250 Gallons	80	Consume

800 / 800 Planned

Cancel **Save**

2. To begin recording distillation cuts, click 'Cut' and select what Cut Type you are recording.
 - a. The Production Cut Types available come from the Cut Types setup on the Recipe.

Production Processing Search for anything...

Edit Production Order **Log QC** **Batch Management** **Production Orders**

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4516 4) Krill Rum Hearts Full Strength	In Process	1/10/2024 12:21 PM	1/29/2024 12:22 PM	1/10/2024 8:22 PM		Gallons	250	0	160

Stage Name **Equipment** **Status** **UoM** **Planned Units** **Completed Units** **Proof**

Krill Rum Hearts Spirit Run	Copper Pot Still	In Process	Gallons	250	0	160	Cut	Correct	Log QC
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Distilling Cut

Production Cut Type

Heads
Hearts
Tails

OK **Cancel** **Save**

3. Select the portable Equipment that is storing the spirit cut.



Production Processing

Search for anything...

[Edit Production Order](#) [Log QC](#) [Batch Management](#) [Production Orders](#)

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4516 4) Krill Rum Hearts Full Strength	In Process	1/10/2024 12:21 PM	1/29/2024 12:22 PM	1/10/2024 8:22 PM		Gallons	250	0	160

[Collapse All](#)

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	
Krill Rum Hearts Spirit Run	Copper Pot Still	In Process	Gallons	250	0	160	Cut Complete Correct Log QC
Planned Start Time	Actual Start Time	Lead Time	Planned End Time	Actual End Time			
1/10/2024 12:22 PM	1/29/2024						

Distilling Cut

Production Cut Type

Hearts

Product	UoM	* Completed Units	* Proof	Proof Gallons	Equipment Type	Equipment	
4516 4) Krill Rum Hearts Full Strength	Gallons	100	160	160	275G Tote	Tote 209	Fill

*** Bulk Quantity** **Calculated Quantity** **Proof Gallons** **Equipment** **Available Capacity / Capacity**

100.00	gal	100.00 gal	160	Tote 209	275 / 275 gal
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[Cancel](#) [Save](#)

- a. 'Create New Equipment' prompt allows the creation of new Equipment records on the fly.
 - i. This is best suited when the cut is being put into a generic tote that is not formally represented in the software as a piece of Equipment.

Production Processing

Search for anything...

[Edit Production Order](#) [Log QC](#) [Batch Management](#) [Production Orders](#)

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4516 4) Krill Rum Hearts Full Strength	In Process	1/10/2024 12:21 PM	1/29/2024 12:22 PM	1/10/2024 8:22 PM		Gallons	250	0	160

[Collapse All](#)

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	
Krill Rum Hearts Spirit Run	Copper Pot Still	In Process	Ga				Cut Correct Log QC
Planned Start Time	Actual Start Time	Lead Time	Pl				
1/10/2024 12:22 PM	1/29/2024						

Distilling Cut

Production Cut Type

Heads

Product	UoM	* Completed Units	* Proof	Proof Gallons	Equipment Type	Equipment	
4531 4) Krill Rum Heads	Gallons	5	100	5	275G Tote		Fill

*** Bulk Quantity** **Calculated Quantity** **Proof Gallons** **Equipment** **Available Capacity / Capacity**

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[Cancel](#) [Save](#)

Add Equipment

Do you want to create new Equipment?

[No](#) [Yes](#)

4. A single cut can be put into multiple pieces of Equipment if needed. The user should represent what is happening in real life.



Production Processing

Search for anything...

Edit Production Order **Log QC** **Batch Management** **Production Orders**

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4516 4) Krill Rum Hearts Full Strength	In Process	1/10/2024 12:21 PM	1/29/2024 12:22 PM	1/10/2024 8:22 PM		Gallons	250	0	160

Collapse All

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	
Krill Rum Hearts Spirit Run	Copper Pot Still	In Process	Gallons	250	100	160	Cut Complete Correct Log QC

Planned Start Time: 1/10/2024 12:22 PM
Actual Start Time: 1/29/2024

Components

Product: 4514 3) Krill Rum Low Wines

Cut Details

Product: 4531 4) Krill Rum Heads
4516 4) Krill Rum Hearts Full Strength

Attach Documents

Upload Files or Drop Files

Distilling Cut

Production Cut Type: Hearts

Product	UoM	* Completed Units	* Proof	Proof Gallons	Equipment Type	Equipment
4516 4) Krill Rum Hearts Full Strength	Gallons	100	162	162	275G Tote	Tote 157

*** Bulk Quantity** **Calculated Quantity** **Proof Gallons** **Equipment** **Available Capacity / Capacity**

75.00 gal	75.00 gal	121.5	Tote 177	275 / 275 gal	
25.00 gal	25.00 gal	40.5	Tote 157	275 / 275 gal	

Cancel **Save**

5. The 'Correct' function allows editing cuts data prior to completing the Production Order.

Search for anything...

Correct Distilling Cut Data

Heads

Product	* Equipment	* Completed Units	* Proof
4531 4) Krill Rum Heads	Tote 287	5	100

Hearts

Product	* Equipment	* Completed Units	* Proof
4516 4) Krill Rum Hearts Full Strength	Tote 209	100	160
4516 4) Krill Rum Hearts Full Strength	Tote 177	75	162
4516 4) Krill Rum Hearts Full Strength	Tote 157	25	162
4516 4) Krill Rum Hearts Full Strength	Tote 135	50	159

Tails

Product	* Equipment	* Completed Units	* Proof
4532 4) Krill Rum Tails	Tote 103	12	112

Cancel **Save**

Correct **Log QC**

6. Click 'Complete' and enter the date that represents when the distillation activity occurred in real life.
- Backdating is supported.
 - This is the date that will represent the 'birth' of the spirit on the TTB DRO.



Production Processing

Search for anything...

Edit Production Order

Log QC

Batch Management

Production Orders

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Krill Rum-Demo	887	4516 4) Krill Rum Hearts Full Strength	In Process	1/10/2024 12:21 PM	1/29/2024 12:22 PM	1/10/2024 8:22 PM		Gallons	250	0	160

Collapse All

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof			
Krill Rum Hearts Spirit Run	Copper Pot Still	In Process	Gallons	250	250	160.6	Cut	Complete	Correct Log QC
Planned Start Time	Actual Start Time	Lead Time	Planned End Time	Actual End Time					
1/10/2024 12:22 PM	1/29/2024 12:22 PM	8 Hours	1/10/2024 8:22 PM						

Components

Product	End Time	Status	Memo	UoM	Planned Units	Completed Units	Proof Gallons	
4514 3) Krill Rum Low Wines	1/29/2024 12:22 PM	In Process		Gallons	800	800	640	Assign

Cut Details

Product	End Time	Status	Cut Type	UoM	Completed Units	Proof	Proof Gallons	Equipment
4531 4) Krill Rum Heads	1/29/2024 12:24 PM	Completed	Heads	Gallons	5	100	5	Tote 287
4516 4) Krill Rum Hearts Full Strength	1/29/2024 12:24 PM	Completed	Hearts	Gallons	100	160	160	Tote 209
4516 4) Krill Rum Hearts Full Strength	1/29/2024 12:25 PM	Completed	Hearts	Gallons	75	162	121.5	Tote 177
4516 4) Krill Rum Hearts Full Strength	1/29/2024 12:25 PM	Completed	Hearts	Gallons	25	162	40.5	Tote 157
4516 4) Krill Rum Hearts Full Strength	1/29/2024 12:26 PM	Completed	Hearts	Gallons	50	159	79.5	Tote 135
4532 4) Krill Rum Tails	1/29/2024 12:26 PM	Completed	Tails	Gallons	12	112	13.44	Tote 103

Attach Documents

Upload Files or Drop Files

Confirm Production Order Actual End Time

Please confirm Actual End Time: 1/10/2024 12:51 PM

Cancel Complete Production Order

FAQs

Does the Equipment used to store the distilled spirit have any impact on TTB DRO reporting?

No, Equipment does not directly relate to TTB DRO reporting in any way. The proof gallons associated with Distillation PdO's is reported on the TTB DRO Production Report.