



Production Wizard™

PRODUCT EXAMPLE - BATCH ICE CREAM

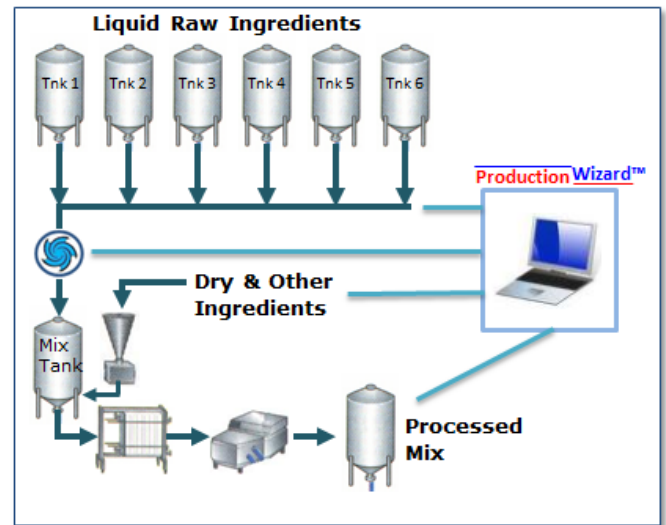
Please note that this is only one example for one food product type. Production Wizard™ is customizable and a very flexible program that can be used to batch almost anything.



Janet and Brad work for R.H. Ice Cream Company. We will follow their progress as they use Production Wizard™ to carry out their daily tasks.

The tasks we will be watching include:

- Updating information for a tank recently filled with cream.
- Formulating a mix to meet compositional requirements.
- Creating a batch sheet report.
- Outputting information to inventory, accounting and production software programs.



Update Tank Information



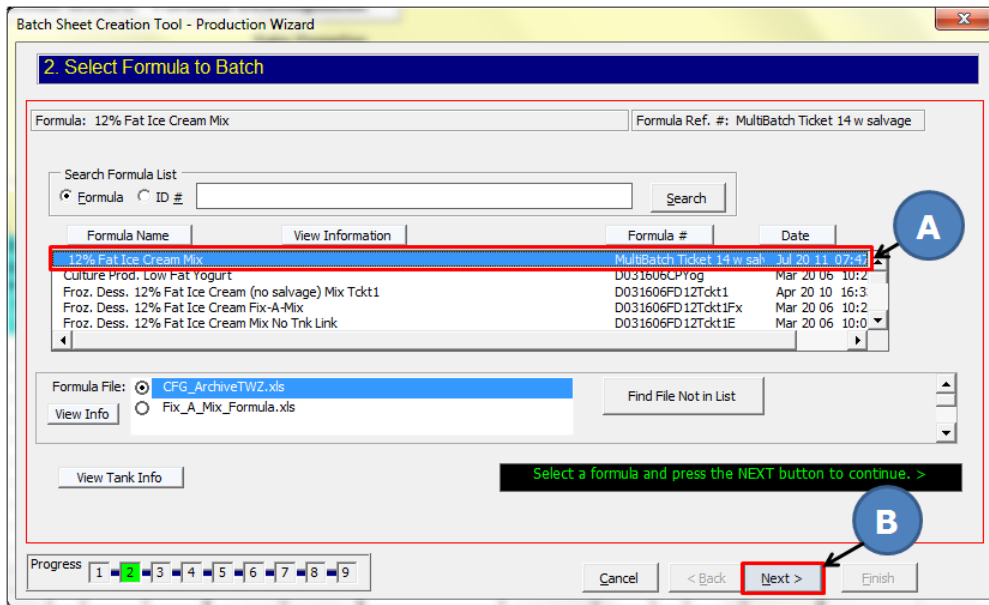
Earlier a shipment of cream arrived. It is stored in a location designated Tank 1 by the plant manager. At Brad's plant it is the responsibility of people working in the lab to update tank contents and composition information.

Janet works in the lab. She uses Production Wizard™ to update tank information which Brad will use to batch his mix. First Janet uses the Production Wizard™ Tank Editor to place the cream in tank 1 and enter the amount (a screen shot of this feature is not shown). Production Wizard™ notes when the tank was filled and will keep track of how much cream is in the tank and how long it is stored. Production Wizard™ will warn Brad, Janet, and others if the cream is in the tank too long. Next Janet updates the composition of the cream in Tank 1. Her analysis system could be linked directly into Production Wizard™ but at the moment this is not the case. She will manually update the tank composition using the Production Wizard™ Ingredient Update tool (a screen shot of this feature is not shown). It is wizard based which makes it very easy to use. She has configured Production Wizard™ to prompt for the total fat and total solids of the cream. This information is used to calculate the milk solids non-fat (MSNF) and a variety of other components. Brad will use this updated tank information when he starts making his mix.

Formulate Mix



Let's go back and watch what Brad is doing. Brad has started batching his 12% ice cream mix using the Batch Creation Tool. This feature is wizard based which makes it easy to learn. Brad simply has to follow the instructions provided on each screen. The screen Brad is working in is shown. In this step, Brad selects the formula he wishes to make, **12 % Fat Ice Cream Mix (A)** and clicks the **Next** button **(B)** to continue. Production Wizard™ retrieves all necessary formula and tank information.



Batch Sheet Creation Tool - Production Wizard

2. Select Formula to Batch

Formula: 12% Fat Ice Cream Mix Formula Ref. #: MultiBatch Ticket 14 w salvage

Search Formula List
 Formula ID # Search

Formula Name	View Information	Formula #	Date
12% Fat Ice Cream Mix		MultiBatch Ticket 14 w sal	3/1/20/11 07:48
Culture Prod. Low Fat Yogurt		D031605CPYog	Mar 20 05 10:2
Froz. Dess. 12% Fat Ice Cream (no salvage) Mix Tckt1		D031606FD12Tckt1	Apr 20 10 16:3
Froz. Dess. 12% Fat Ice Cream Fix-A-Mix		D031606FD12Tckt1Fx	Mar 20 06 10:2
Froz. Dess. 12% Fat Ice Cream Mix No Trk Link		D031606FD12Tckt1E	Mar 20 06 10:0

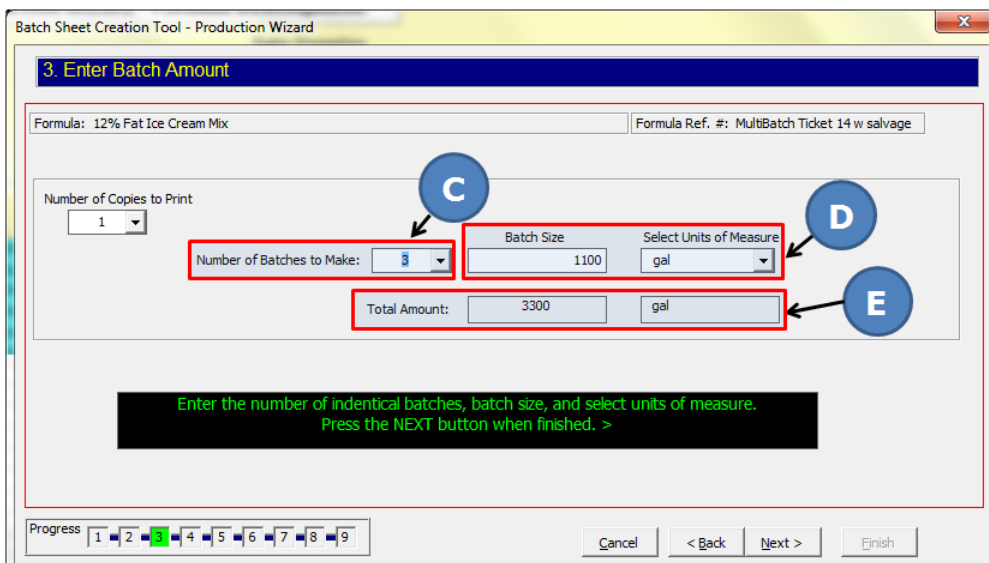
Formula File: CFG_ArchiveTWZ.xls Find File Not in List
 Fix_A_Mix_Formula.xls

View Tank Info

Select a formula and press the NEXT button to continue. >

Progress: 1 2 3 4 5 6 7 8 9 Cancel < Back Next > Finish

Brad needs to make 3 sequential batches. In the space provided, he enters that number **(C)**, and the size of each batch which is 1100 gal **(D)** to give him 3300 gal total **(E)**. These tasks completed he clicks the **Next** button.



Batch Sheet Creation Tool - Production Wizard

3. Enter Batch Amount

Formula: 12% Fat Ice Cream Mix Formula Ref. #: MultiBatch Ticket 14 w salvage

Number of Copies to Print: 1

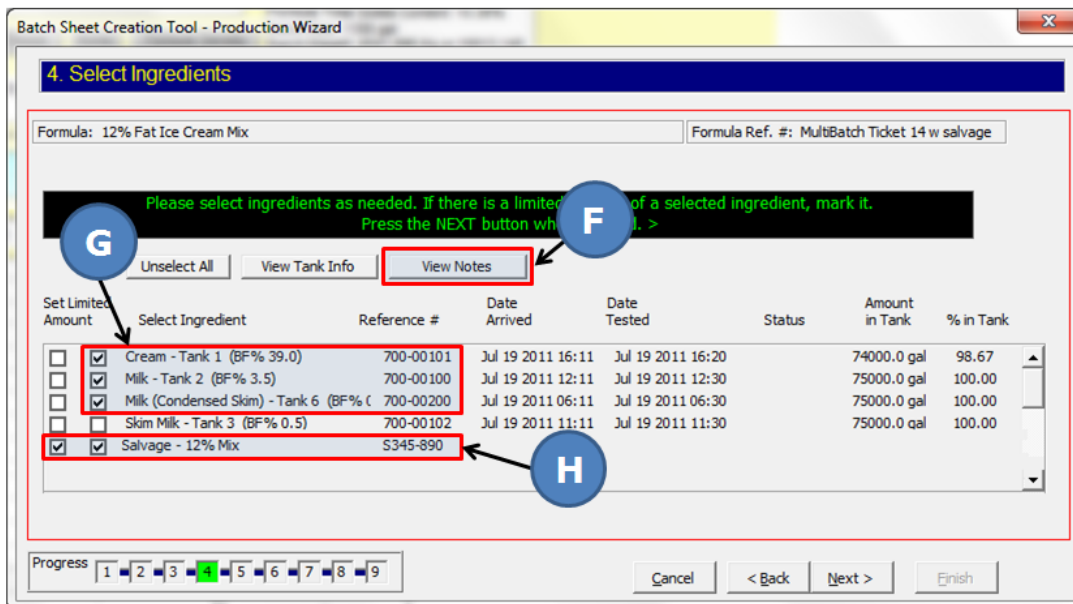
Number of Batches to Make: 3 Batch Size: 1100 Select Units of Measure: gal

Total Amount: 3300 gal

Enter the number of identical batches, batch size, and select units of measure. Press the NEXT button when finished. >

Progress: 1 2 3 4 5 6 7 8 9 Cancel < Back Next > Finish

In the next screen, Brad reviews and selects the raw tank ingredients he will use to make his mix. The **Select Ingredients** screen provides detailed information on each tank. If he is not sure which tank ingredients are required, he can click the **View Notes** button (F) for help. Brad selects tanks containing cream, milk, and condensed skim (G). He also selects a salvage ingredient which is composed of left over mix and water (H). The amount of salvage used in the formula is limited based on how the program administrator configured the formula. Later, Brad will be asked about the current composition of the salvage and how much he would like to use. Production Wizard™ will take into account the current composition of each ingredient used in the formula and minimize raw ingredient costs when it calculates the amount of each required to make the mix.



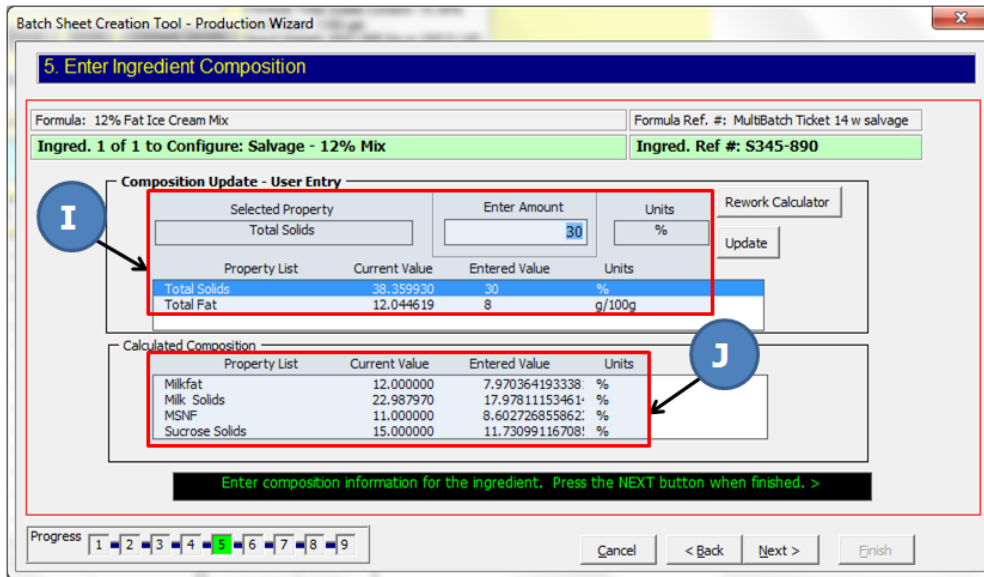
Set Limited Amount	Select Ingredient	Reference #	Date Arrived	Date Tested	Status	Amount in Tank	% in Tank
<input checked="" type="checkbox"/>	Cream - Tank 1 (BF% 39.0)	700-00101	Jul 19 2011 16:11	Jul 19 2011 16:20		74000.0 gal	98.67
<input checked="" type="checkbox"/>	Milk - Tank 2 (BF% 3.5)	700-00100	Jul 19 2011 12:11	Jul 19 2011 12:30		75000.0 gal	100.00
<input checked="" type="checkbox"/>	Milk (Condensed Skim) - Tank 6 (BF% 0.5)	700-00200	Jul 19 2011 06:11	Jul 19 2011 06:30		75000.0 gal	100.00
<input type="checkbox"/>	Skim Milk - Tank 3 (BF% 0.5)	700-00102	Jul 19 2011 11:11	Jul 19 2011 11:30		75000.0 gal	100.00
<input checked="" type="checkbox"/>	Salvage - 12% Mix	S345-890					

The **Select Ingredients** screen does not show every ingredient used in the formula only those that the program administrator has decided that Brad will need to access for efficient product batching. This provides Brad **controlled flexibility**. It allows him to make certain allowable substitutions. In this example, if Brad runs out of milk he can switch to skim milk to make his mix. The program administrator could have added skim milk powder as an option if Brad needs a backup if he runs out of condensed skim. The formula could be also be configured to use some water if needed to balance the mix. The possibilities are endless. Production Wizard™ can reformulate for any of these eventualities. This means Brad does not have to worry about having to pull out a calculator or spreadsheet to finish batching a product.

Brad is also provided useful information about each tank ingredient. If one of the tank ingredients was not analyzed by the lab or it has been in the tank too long, Brad will be warned or not allowed to use that ingredient depending on how the program administrator configured the formula.

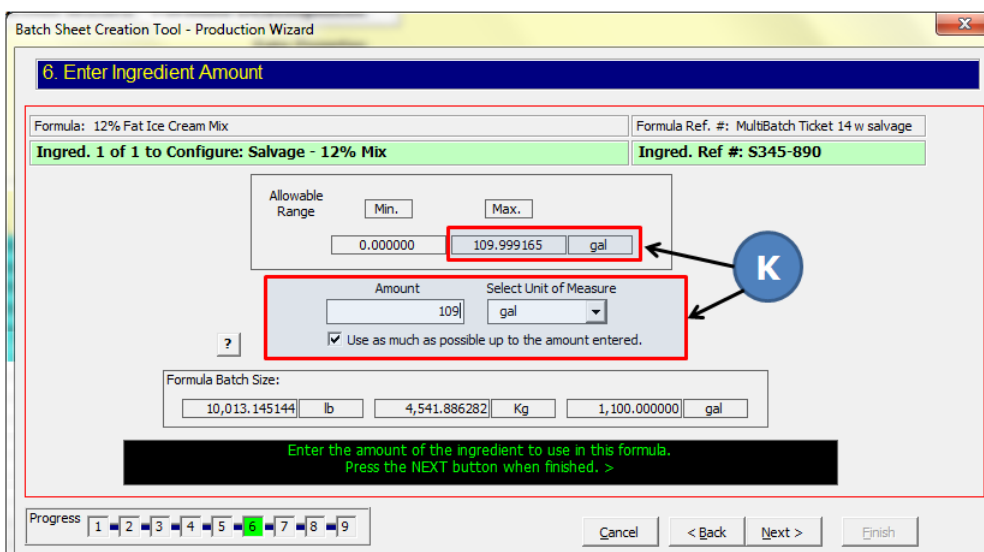
What if Brad forgot to select a source of cream and Production Wizard™ did not have enough milk fat to make the batch? He would be warned that the formula does not meet all its requirements, a diagnostic report would be created to show him what is wrong; and he would go back and quickly fix the problem.

In the next screen, Brad is asked to enter the composition of the salvage he is using in this formula. Janet over in the lab could have taken care of this but the program administrator configured the formula so that Brad enters the values (I). Once Brad enters the total fat and total solids values for the salvage, other properties such as milk fat, milk solids, msnf, and sucrose solids are calculated.



Before Brad's company started using Production Wizard™ the only thing that was considered when using salvage ingredients was fat and total solids. Now most or all the components in a salvage ingredient are included when reformulating the mix such as cocoa solids, sugar solids, and msnf which decreases the cost of the mix.

Below, Brad is setting how much salvage is available (K). The amount he wishes to use was previously limited by the program administrator to a maximum of 10%. Production Wizard™ will use as much salvage as possible entered up to the amount designated (no more than 10%) as long as the formula meets all compositional requirements.



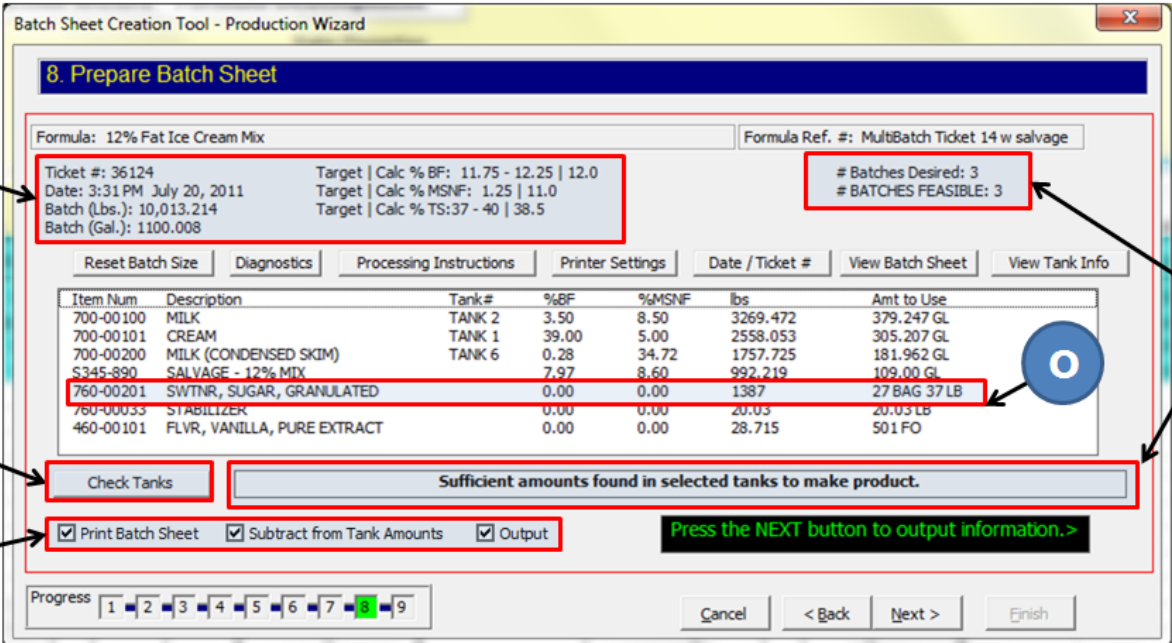
Create Batch Report and Output to Other Software programs

In the final step, the batch report is displayed. This, like many other portions of the Batch Creation Tool, was configured to meet Brad's needs. Key information such as the total batch size and composition are displayed in the upper left portion of the screen (L).

Brad wants to make 3 identical 1100 gal batches. The upper right portion of the screen shows that Brad should have enough ingredients available to make 3 batches (M). The notice in the lower portion of the screen tells Brad that there are sufficient amounts found in the selected tanks to make the product (M). Brad can click the **Check Tanks** button (N) to ascertain how much is in each tank now and how much will be left after he makes this batch. If there was not enough of a particular ingredient or Brad made a mistake, he would be provided diagnostic messages and he would click the **Back** button to go to previous screens and rectify the issue.

The middle portion of the screen provides information on ingredient amounts and composition (O). The program administrator configured granulated sugar to be displayed as number of whole bags and the remainder in pounds. That is exactly how it is displayed in this formula (O). This provides convenience because Brad can dispense the bags and only has to weigh the remaining amount. Just about any unit of measure and reporting scheme can be used in the Batch Creation Tool.

The bottom portion of the screen shows output operations (P). When Brad presses the **Next** button, a custom batch report is printed, ingredient usage is subtracted from tank amounts, and the output is exported to inventory, accounting and production software programs.



8. Prepare Batch Sheet

Formula: 12% Fat Ice Cream Mix Formula Ref. #: MultiBatch Ticket 14 w salvage

Ticket #: 36124 Target | Calc % BF: 11.75 - 12.25 | 12.0
 Date: 3:31 PM July 20, 2011 Target | Calc % MSNF: 1.25 | 11.0
 Batch (Lbs.): 10,013.214 Target | Calc % TS: 37 - 40 | 38.5
 Batch (Gal.): 1100.008

Batches Desired: 3
 # BATCHES FEASIBLE: 3

Reset Batch Size Diagnostics Processing Instructions Printer Settings Date / Ticket # View Batch Sheet View Tank Info

Item Num	Description	Tank#	%BF	%MSNF	lbs	Amt to Use
700-00100	MILK	TANK 2	3.50	8.50	3269.472	379.247 GL
700-00101	CREAM	TANK 1	39.00	5.00	2558.053	305.207 GL
700-00200	MILK (CONDENSED SKIM)	TANK 6	0.28	34.72	1757.725	181.962 GL
5345-890	SALVAGE - 12% MIX		7.97	8.60	992.219	109.00 GL
760-00201	SWTNR, SUGAR, GRANULATED		0.00	0.00	1387	27 BAG 37 LB
760-00033	STABILIZER		0.00	0.00	20.03	20.03 LB
460-00101	FLVR, VANILLA, PURE EXTRACT		0.00	0.00	28.715	501 FO

Check Tanks Sufficient amounts found in selected tanks to make product.

Print Batch Sheet Subtract from Tank Amounts Output Press the NEXT button to output information. >

Progress: 1 2 3 4 5 6 7 8 9 Cancel < Back Next > Finish



Brad printed a copy of his batch report. This report was customized to meet the needs of Brad, Janet in the lab, and others at R.H. Ice Cream Company. The batch sheet was set up to provide information and allow Brad and Janet to enter information. The number of batches to be made, mix item #, and description are shown in the upper left portion of the page (Q). A unique ticket number and the date the report was created are shown in the upper right corner of the page (R).

The middle portion is devoted to information that is useful to Janet. On the left, the target ranges for butterfat, msnf, total solids, and the composition that Production Wizard™ calculated are reported (S). On the right there are spaces provided for fat and solids analyses values to be entered prior to pasteurization and after each batch has moved to the pasteurized product tank (T).

The bottom portion of the page relates to making each batch. The amounts per batch and total amounts are shown (U). For each ingredient the amount to use is displayed in units previously configured by the program administrator (V). Brad and others have spaces provided to enter actual amounts dispensed and lot numbers (W). If they dispense the amount shown they simply put a check mark in the box to note that the ingredient was added. Processing instructions are displayed at the very bottom of the page (X).

BATCH REPORT

Number of Batches to Make: (Q)

Mix Item #: 00001357
Mix Description: 12% Fat Ice Cream Mix

(R) Ticket #: 036124
Date: 9:21 AM July 20, 2012
Day of Week: Wednesday

	Target	Calculated
% BF	11.75 - 12.25	12.000
% MSNF	11.00	11.000
% TS	37 - 39.25	38.500

(T) BF Test Results Total Solids Results

	Raw Side	Past Tank	Raw Side	Past Tank
Batch #1				
Batch #2				
Batch #3				

(U) Amount Per Batch lbs: 10013 | gals: 1100
Total Amount for 3 Batches lbs: 30039 | gals: 3300

Item #	Description	Tank#	%BF	%MSNF	Lbs	Amt To Use	Batch #1		Batch #2		Batch #3	
							Actual Used	Lot#	Actual Used	Lot#	Actual Used	Lot#
700-00100	Milk	TANK 2	3.50	8.50	3269.47	379.247 GL						
700-00101	Cream	TANK 1	39.00	5.00	2558.05	305.207 GL						
700-00200	Condensed Skim	TANK 6	0.28	34.72	1757.73	181.962 GL						
S345-890	Salvage - 12% Mix		7.97	8.60	992.22	109.00 GL						
760-00201	Sugar, granulated		0.00	0.00	1387.00	27 BAG 37 LB						
760-00033	Stabilizer		0.00	0.00	20.03	20.03 LB						
460-00101	Vanilla, Pure Extract		0.00	0.00	28.72	501 FO						

(V) Processing Instructions

<ol style="list-style-type: none"> 1. Add the sugar and stabilizer and mix well 2. Transfer to the blend tank. 3. Add condensed skim. 4. Add any remaining milk and/or cream to the blend tank directly. 	<ol style="list-style-type: none"> 5. Agitate for 10 minutes before retrieving a sample. 6. After lab OK, pasteurize at 182 degrees F with 1,500 psi of Homo Pressure. 7. Run the finished product into a refrigerated, sanitized tank. 8. Sample for final analysis. 9. Keep refrigerated until packaged
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(X)

Contact Us

We hope you found this example informative. Production Wizard™ is an application that will start saving you money immediately. Batching operations where production staff do hand calculations or use a spreadsheet to balance formulas can lead to costly mistakes. Production Wizard™ provides for managed, fast, and efficient batch creation. It reduces product loss, and provides for more effective use of your staff's time. Please contact us today to learn more about Production Wizard™ or to schedule a live demonstration.