



# PRODUCT EXAMPLE **TechWizard™**

## PIZZA

Carla is using an old family recipe to develop a frozen pizza product for her company. Carla would like to do the following:

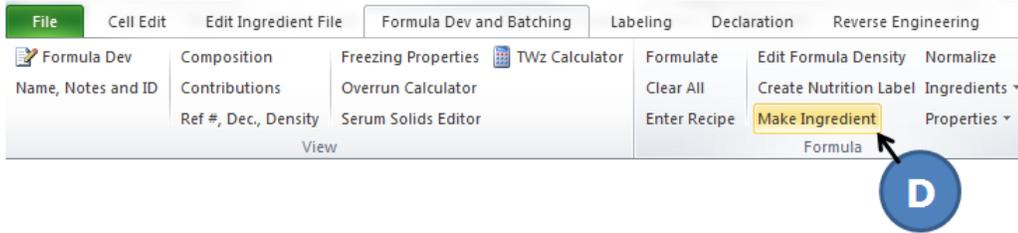
- Create a dough formula.
- Convert the dough formula into a partially baked crust ingredient with 8% moisture.
- Create pizza sauce formula.
- Convert the pizza sauce formula into an ingredient.
- Create a pizza formula with the sauce, crust, and mozzarella cheese combined.
- Determine if the finished pizza contains any allergens.
- Determine the formula cost for one pizza and for 1000 pizzas.
- Create an ingredient statement and a nutrition facts panel.
- Save all formula information.

### Create Pizza Crust Ingredient

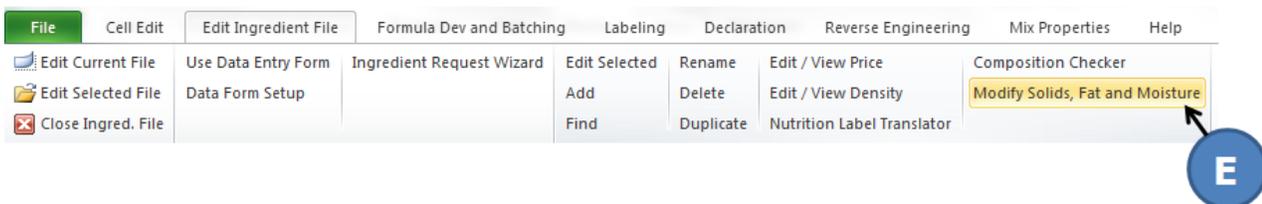
Carla will first work with the crust. She enters the recipe for the dough into TechWizard™. The following shows the TechWizard™ screen after she completes this task. For each ingredient (A) she entered a corresponding recipe amount (B). The total weight of the dough recipe is 2.3 lbs. (C).

TechWizard™ - Formula Development														
Formula Name & ID														
Pizza Dough														
Demo Formula														
Formula Status <input checked="" type="checkbox"/> Always Show Ingredients														
FORMULATION MEETS ALL CONSTRAINTS.														
Formulate Batch Clear Formula Edit Price														
Add Ingredients Add Properties														
Show Price Per <input checked="" type="checkbox"/> Pound <input checked="" type="checkbox"/> Kilogram														
Batch Size: 2.30 lb														
Ref #	Ingredient #	% (Wt./Wt.)	Min	Max	Diag	Price per Lb.	Formula Price Per Lb.	Price Per Kg	Formula Price Per Kg	Price Per Batch Size	lb	gal	Amount	Unit
NDB No. 20581	Wheat flour, white, all-purpose, enriched, unbleached	55.027	0.000	100.000		1.000	0.550	2.205	1.213	1.266	1.266	0.287	20.250	oz
Twz 0140	Water	38.043	0.000	100.000		0.001	0.000	0.002	0.001	0.001	0.875	0.105	14.000	oz
NDB No. 4053	Oil, olive, salad or cooking	5.435	0.000	100.000		2.250	0.122	4.960	0.270	0.281	0.125	0.016	2.000	oz
Twz 0106	Salt	1.196	0.000	100.000		0.609	0.007	1.343	0.016	0.017	0.028	0.003	0.440	oz
NDB No. 18375	Leavening agents, yeast, baker's, active dry	0.299	0.000	100.000		1.000	0.003	2.205	0.007	0.007	0.007	0.001	0.110	oz
Total		100.000					0.683		1.506	1.571	2.300			

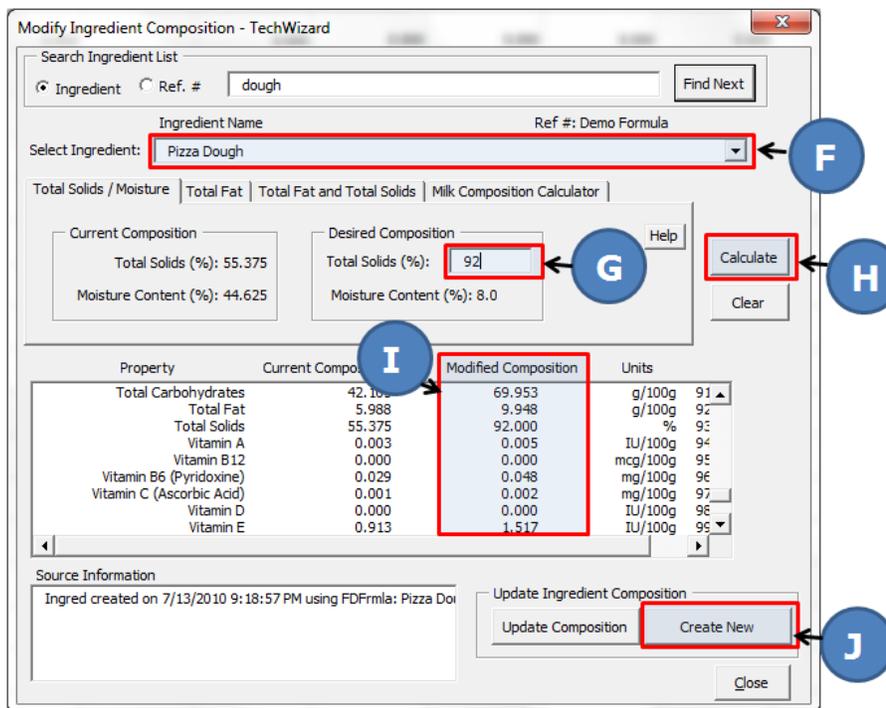
Carla clicks the **Make Ingredient** option (D). This automatically converts the formula into an ingredient, adds it to the ingredient file, and calculates all nutrition values.



Carla edits the ingredient file and clicks the **Modify Solids, Fat and Moisture** option (E).



The Modify Ingredient Composition window appears, shown below. Carla uses this feature to reduce the moisture content of the dough to create a new partially baked crust ingredient which has 92 % solids or 8% moisture.



In the window shown on the left, Carla selects the pizza dough ingredient (F), enters the desired total solids value (G), and clicks the **Calculate** button (H). The modified composition is displayed (I) which allows Carla to review the data for the pizza crust. She clicks the **Create New** button (J) and her new partially baked pizza crust ingredient is added to the ingredient file and ready to be used to build formulas.



### Create Pizza Sauce Ingredient

Carla now works with the sauce entering the recipe into TechWizard™ and converting the formula into an ingredient. The procedures (not shown in this document) are much the same as for the pizza crust except she does not need to do any moisture adjustment.

### Create Pizza Formula, Determine Allergen Content, & Determine Formula Costs

Carla now has all the necessary ingredients to create a pizza formula with the sauce, crust, and mozzarella cheese combined. Once this is completed she will determine if the finished pizza contains any allergens. The pizza formula is shown below. TechWizard™ determined that the pizza contains the following allergens: milk, fish, and wheat (K).

Ref #	Ingredient #	% (Wt./Wt.)	Min	Max	Diag	Property #	Composition	Units to Use
Demo Formula	Pizza Crust	66.666	0.000	100.000			33.334	%
Demo Formula	Pizza Sauce	16.667	0.000	100.000			0.000	%
NDB No. 1026	Cheese, mozzarella, whole milk	16.667	0.000	100.000			16.667	%
	Total	100.000						

Property #	Composition	Units to Use
Milk Allergen	33.334	%
Egg Allergen	0.000	%
Fish Allergen	16.667	%
Shellfish Allergen	0.000	%
Tree Nuts Allergen	0.000	%
Wheat Allergen	66.666	%
Peanut Allergen	0.000	%
Soybean Allergen	0.000	%

**Create New Unit**

Type New Unit Name:  = Enter Amount:  Select Unit:

Conversion Factor: 1.469725

Delete Existing Unit:  Unit:

Definition: 2.2046226 x 1 lb = 1 Kg

**Instructions:**

Create a New Production Unit:

1. Type the new unit name in the box.
2. Enter the equivalent amount and unit.
3. Press the Calculate Factor button.
4. Press the Add Unit button.
5. Press OK when finished.

Delete Existing Unit:

1. Select the unit in the dropdown.
2. Press the Delete button.
3. Press OK when finished.

Carla requires the ingredient cost for one pizza and for 1000 pizzas. Her finished pizza weight is 24 oz. She creates a new unit of measure called “pizza” that weighs 24 oz (L).

She uses this unit of measure in the batching section to determine the ingredient cost for one pizza (M) and for 1000 pizzas (N).

TechWizard - Formula Batcher									
Formula Name & ID									
Pizza									
Demo Formula									
Formula Status		<input checked="" type="checkbox"/> Always Show Ingredients							
FORMULATION MEETS ALL CONSTRAINTS.									
Formulate		Batch		Clear Formula		Edit Price			
Add Ingredients		Add Properties							
Sort		Remove All		Delete		Clear			
Ref #	Ingredient #	% (Wt./Wt.)	Price Per Batch Size	lb	gal	Price Per Batch Size	lb	gal	
Demo Formula	Pizza Crust	66.666	1.300	1.000		1300.01	1000.011		
Demo Formula	Pizza Sauce	16.667	0.103	0.250	0.030	102.503	250.007	29.957	
NDB No. 1026	Cheese, mozzarella, whole milk	16.667	0.375	0.250	0.063	375.010	250.007	63.286	
	Total	100.000	1.778	1.500		1777.526	1500.024		

### Create Ingredient Statement and Nutrition Facts Panel

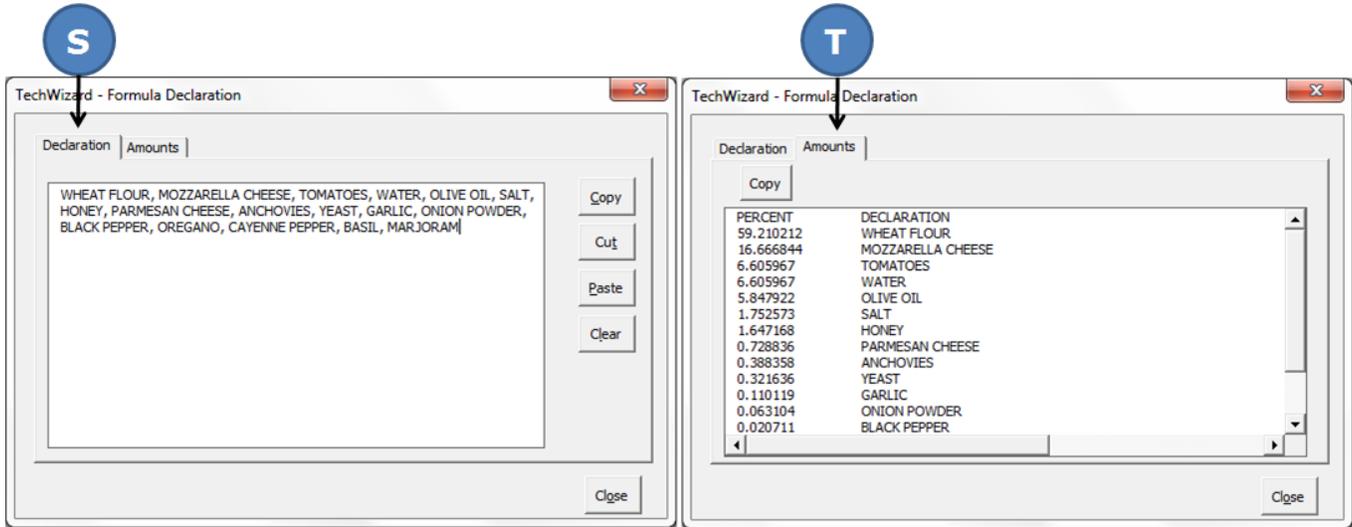
TechWizard™ - Ingredient Declaration Section													
Add		Delete		View Dec		Include		Exclude		Clear Formula		Edit Dec	
Selected: Formula: Pizza													
Ref Num: Demo Formula													
SubTotal: 100		Number: 3		Ingr: 3		Total Ingr: 21							
Formula Name: Pizza													
66.666 PIZZA CRUST FORMULA										← O			
88.816 WHEAT FLOUR													
0.000 WATER													
8.772 OLIVE OIL													
1.930 SALT													
0.482 YEAST													
16.667 PIZZA SAUCE FORMULA										← P			
39.635 TOMATOES													
39.635 WATER													
9.883 HONEY													
4.373 PARMESAN CHEESE													
2.796 SALT													
2.330 ANCHOVIES													
0.661 GARLIC													
0.379 ONION POWDER													
0.124 BLACK PEPPER													
0.058 OREGANO													
0.051 CAYENNE PEPPER													
0.041 BASIL													
0.033 MARJORAM													
16.667 MOZZARELLA CHEESE										← Q			

Carla requires an ingredient statement that combines any ingredients that appear more than once in her formula. She loads her formula in the TechWizard™ Ingredient Declaration Section.

The pizza formula and all the ingredients that make up each component are loaded. This includes the pizza crust (O), pizza sauce (P), and the mozzarella cheese (Q). This provides Carla an overall “road map” of her formula. She is ready to produce a condensed ingredient statement by clicking the **View Dec** button (R).



The Formula Declaration window appears. It displays her condensed ingredient statement that combines any ingredients that appear more than once in her pizza formula (S). It also displays the percent concentration for each ingredient included in the ingredient declaration (T).



Carla uses the tabular label format to create a nutrition facts panel for her pizza. She saves all her work in a TechWizard™ formula file. She can retrieve it later and make further changes as needed.

Nutrition Facts	Amount Per Serving	% Daily Value*	Amount Per Serving	% Daily Value*	*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: Calories: 2,000 2,500
	Serving Size 1 slice (79g) Servings Per Container 1 Calories 270 Calories from Fat 70	<b>Total Fat</b> 8g	<b>12%</b>	<b>Total Carbohydrate</b> 39g	
	Saturated Fat 2.5g	13%	Dietary Fiber 2g	8%	
	Trans Fat 0g		Sugars 2g		
	<b>Cholesterol</b> 10mg	<b>3%</b>	<b>Protein</b> 8g		
	<b>Sodium</b> 670mg	<b>28%</b>			
	Vitamin A 4%	•	Vitamin C 2%	•	Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4
			Calcium 8%	•	
			Iron 15%		

### Versatility

TechWizard™ is a very versatile tool. Please feel free to contact us if you would like to learn more about TechWizard™.