

Recipe Enlargement Form

- Enlarge the original recipe to 300 servings by using the **factor method** (see FFF).
- Calculate to six decimal places and round off to five decimal places (Columns C & D)
_____ (to capture light ingredients such as dried herbs).
portions)
- Your final measures should be in simplified measures and rounded off following rounding rules in Column E.
- Show all calculations within the table below.

Original # servings: 8

Factor:
(300/original)

	Column A Ingredients:	Column B Original recipe amounts	Column C Convert to common denominator, volume or weight, depending upon item	Column D Multiply by factor (show your work; include calculations here) Amount x factor = ?	Column E Convert to appropriate measure & simplify (use 1 gallon vs. 128 oz, etc.) (Show your work; include calculations such as how you convert from pounds > ounces > gallons > gallons + cups, etc.) This is where you ROUND to <u>full</u> measures! See "rounding rules" in FFF
1	Broccoli Florets	6 cups	6 cups	6 cups x 37.5 = 225 cups	1 pound = 4 cups; 225/4 = 56.25 pounds; 0.25 pounds = 4 oz. => 56 pounds + 4 oz
2	Butter	3 tbsp	3 tbsp	3 tbsp x 37.5 = 112.5 tbsp	16 tbsp = 1 cup; 112.5/16 = 7.03125 cups. 1 pound = 2 cups. 7.03125/2 = 3.515625. => 3.5 pounds + 1/4 oz
3	Onion	3/4 cup	3/4 cup	3/4 cup x 37.5 = 28.125 cups	1 pound = 3 1/2 cups; 28.125/3.5 = 8.03571 pounds. => 8 pounds + 1/2 oz (16 onions)
4	All-Purpose Flour	3 tbsp	3 tbsp	3 tbsp x 37.5 = 75 tbsp	16 tbsp = 1 cup; 4.6875 cups. (1 pound = 4 cups). => 4 cups + 1/2 cup + 3 tbsp
5	Whole Milk	2 cups	2 cups	2 cups x 37.5 = 75 cups	16 cups = 1 gallon; 75/16 = 4.6875 gallons. => 4 gallons + 2 quarts + 3 cups.
6	Cream Cheese	3 tbsp	3 tbsp	3 tbsp x 37.5 = 112.5 tbsp	1 pound = 2 cups; 112.5/32 tbsp = 3.515625 pounds. => 3 pounds + 8 1/4 oz
7	Shredded Sharp Cheddar Cheese	2 cups	2 cups	2 cups x 37.5 = 75 cups	1 pound = 4 cups; 75/4 = 18.75 pounds. => 18 pounds + 12 oz
8	White Rice	1 cup raw	1 cup	1 cup x 37.5 = 37.5	1 pound = 4 1/2 cups; 37.5/4.5 = 8.33 => 8 pounds + 5 1/2 oz

9	Salt	$\frac{1}{8}$ tsp	$\frac{1}{8}$ tsp	$\frac{1}{8}$ tsp x $37.5=4.6875$ tsp	3 tsp=1 tbsp; $4.6875/3=1.5625$ tbsp. => 2 tbsp + $\frac{1}{4}$ tsp
10	Pepper	$\frac{1}{8}$ tsp	$\frac{1}{8}$ tsp	$\frac{1}{8}$ tsp x 37.5 = 4.6875 tsp	3 tsp=1 tbsp; $4.6875/3=1.5625$ tbsp. => 2 tbsp + $\frac{1}{4}$ tsp
11	Garlic Powder	$\frac{1}{4}$ tsp	$\frac{1}{4}$ tsp	$\frac{1}{4}$ tsp x 37.5= 9.375 tsp	3 tsp=1 tbsp; $9.375/3=3.125$ tbsp. => 3 tbsp + $\frac{1}{2}$ tsp
12	Dry Mustard Powder	$\frac{1}{2}$ tsp	$\frac{1}{2}$ tsp	$\frac{1}{2}$ tsp x 37.5= 18.75 tsp	3 tsp=1 tbsp; $18.75/3=6.25$ tbsp. => 6 $\frac{1}{2}$ tbsp
13	Paprika	$\frac{1}{2}$ tsp	$\frac{1}{2}$ tsp	$\frac{1}{2}$ tsp x 37.5= 18.75 tsp	3 tsp=1 tbsp; $18.75/3=6.25$ tbsp. => 6 $\frac{1}{2}$ tbsp

**UC Davis Dining Services
STANDARDIZED RECIPE FORM**

Recipe Name: Broccoli Rice Casserole from Scratch

Major Equipment: hotel full dish pan (12 x 20 in, 2 ½ in deep), tilting fry pan, boiler, steamer, deck oven.

Yield: 300

Cooking Temperature: 350 degrees fahrenheit

Portion Size: 3 x 1 ½ inch section

Cooking Time: 35 minutes

Portion Utensils: turner spatula

Ingredient:	Amount: Volume/Weight/Count (select one)	Procedure:
White rice	8 pounds + 5 ½ oz dry	1. Steam white rice in 3 30 quart steamers under medium pressure. Preheat oven to 350 degrees fahrenheit.
Onion, flour, garlic powder, black pepper	about 16 whole, 4 cups + ½ cup + 3 tbsp, 3 tbsp + ½ tsp, 2 tbsp + ¼ tsp (respectively)	2. Dice onion. Add butter and onion on 3 quart tilting skillet on medium-low heat until onion is soft and translucent (5 minutes guess). Stir in the flour, garlic powder, and black pepper, combining for an additional 2 minutes.
Sharp cheddar cheese	18 pounds + 12 oz	3. Shred the cheese and leave aside to mix in the next steps and top dish before baking. Keep the cheese below 40 degrees fahrenheit.
Milk, dry mustard, paprika, cream cheese, cheddar cheese, salt, pepper	4 gallons + 2 quarts + 3 cups, 6 ½ tbsp, 3 pounds + 8 ¼ oz, 14 pounds, 2 tbsp + ¼ tsp, 2 tbsp + ¼ tsp (respectively)	4. Slowly pour the milk into the skillet, mixing with a whisk. Mix it until it becomes thick and bubbly, about 10 minutes (a guess) and reaches at least 165 degrees fahrenheit. Turn off the heat and add dry mustard, paprika, cream cheese, and cheddar cheese (only about ¾ of the total amount). Stir until melted (5 minutes guess). Add any salt or pepper as needed.
Broccoli florets	56 pounds and 4 oz	5. Dice broccoli into cubes, removing stems. Boil in 3 3 quart stock pots for about 5 minutes (a guess), until slightly cooked, but still crisp.
Rice, broccoli, cheese sauce, remaining cheddar cheese	Cooked amount made and 4 pounds + 12 oz	6. In several large stock pots, stir together the cooked rice, broccoli, and cheese sauce. Place mixtures in about 6 greased 12 x 20 in, 2 ½ in deep hotel full

		dish pans. Top with the remaining cheddar cheese, and bake at 350 degrees fahrenheit in a deck oven for about 35 minutes, until cheese is lightly browned.
		7. Serve using a turner spatula in 3 by 1 ½ in pieces

Notes:

Recipe Costing Form

Recipe Name: Broccoli Rice Casserole from Scratch

Yield: 300

Portion Size: 3 x 1 ½ inch section (2 in depth)

Food Cost %: 40%

Cost Per Portion: \$467.68/300=\$1.56

Selling Price: \$1.559/0.40=\$3.90

	Ingredient:	Recipe Quantity (AP) (from Standardized Recipe)	Cost (show calculations)	Total Cost 300 portions
		Volume/ Weight/ Count (select one)	APC/unit (AP Cost)	
1.	Broccoli florets	56 pounds + 4oz	\$0.25/ounce (safeway.com)	\$0.25/oz x 900 oz = \$225
2.	Butter	3.5 pounds + ¼ oz	\$0.37/ounce (safeway.com)	\$0.37/oz x 56.25 oz = \$20.81
3.	Onion	8 pounds + ½ oz	\$1.99/pound (safeway.com)	\$1.99 x 8 = \$15.92
4.	All-Purpose Flour	4 cups + ½ cup + 3 tbsp (1 pound=4 cups;)	\$1.00/pound (safeway.com)	\$1.00 x 1.17 = \$1.17
5.	Whole Milk	4 gallons + 2 quarts + 3 cups.	\$0.05/fl oz (safeway.com)	\$0.05 x 600 fl oz = \$30
6.	Cream Cheese	3 pounds + 8 ¼ oz	\$0.5/oz (safeway.com)	\$0.5 x 8.25oz = \$4.13
7.	Shredded Sharp Cheddar Cheese	18 pounds + 12 oz	\$0.5/oz (safeway.com)	\$0.5 x 300 oz = \$150
8.	White Rice	8 pounds + 5 ½ oz	\$0.08/oz (safeway.com)	\$0.08 x 133.5 oz = \$10.68
10	Salt	2 tbsp + ¼ tsp	\$0.08/oz (safeway.com)	\$0.08 x 1.33oz = \$0.11
	Pepper	2 tbsp + ¼ tsp	\$1.86/oz (safeway.com)	\$1.86 x 0.48oz = \$0.89
	Garlic Powder	3 tbsp + ½ tsp	\$1.28/oz (safeway.com)	\$1.28 x 1.06oz = \$ 1.35
	Dry Mustard Powder	6 ½ tbsp	\$2.68 (safeway.com)	\$2.68 x 1.63 oz = \$4.36

	Paprika	6 ½ tbsp	\$1.74 (safeway.com)	\$1.74 x 1.88oz=\$3.26
			Total Recipe Cost: \$467.68	

Costing Definitions:

Cost per Portion:
\$467.68/300=\$1.559

The cost of each serving. Total recipe cost divided by the number of portions.

Selling Price:

Based on the food cost percentage allowed by the budget. It's the cost per portion divided by the food cost percentage. Selling price = cost per portion/food cost % (in decimal form). Ex: if your cost per portion = \$1.00, to find the selling price, divide by the food cost%: \$1.00/0.40 = \$2.50.

\$1.559/0.40=\$3.90

Food Cost %:

An expression of food cost in relation to the selling price. Food cost % = cost per portion/selling price

Recipe Quantity:

List all ingredients in **one** of the following: by weight, volume or count (each, bunch, case, etc.)

APC/unit:

As purchased cost per unit is the current market price of an ingredient. Can use Safeway.com, Bi-rite, etc.

Total cost:

The total cost of each ingredient used.

Recipe cost:

The total of all items in the total cost column. This represents the total estimated cost of the recipe.

Ingredients

1x 2x 3x

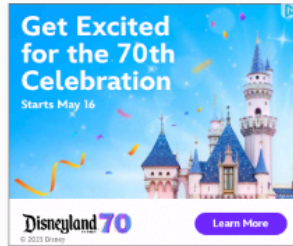
- 6 cups broccoli florets cut into bite sized pieces
- 2 cups cooked white rice

For the Sauce

- 3 tablespoons butter
- $\frac{3}{4}$ cup diced onion about 1 small
- 3 tablespoons [all-purpose flour](#)
- 2 cups milk
- $\frac{1}{4}$ teaspoon garlic powder
- $\frac{1}{4}$ teaspoon black pepper
- $\frac{1}{2}$ teaspoon dry mustard powder
- $\frac{1}{2}$ teaspoon paprika
- $\frac{1}{2}$ teaspoon salt more to taste
- 3 tablespoons cream cheese
- 2 cups shredded cheddar cheese divided

Instructions

- 1 Preheat oven to 350°F.
- 2 Cook onion and butter on medium-low heat until softened and translucent. Stir in flour, garlic powder and pepper. Cook an additional 2 minutes.
- 3 Gradually pour in milk while whisking. Continue whisking over medium heat until thick and bubbly. Remove from heat and add dry mustard, paprika, cream cheese, and 1 $\frac{1}{2}$ cups cheddar cheese. Stir until melted. Taste and season the sauce with additional salt and pepper.
- 4 Place broccoli in boiling water for about 2 minutes. You still want it slightly crisp as it cooks more in the oven.
- 5 Stir together rice, broccoli and cheese sauce. Place in a greased 2 qt casserole dish. Top with remaining cheese and bake 35 minutes or until bubbly and cheese lightly browned.



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Works Cited

1. Molt, M. K. (2017). *Food for fifty*. Pearson Education (US).
2. Nilsson, H. (2019, October 16). *Broccoli rice casserole from scratch*. Spend With Pennies.
<https://www.spendwithpennies.com/broccoli-rice-casserole-scratch/#wprm-recipe-container-134557>