



Recipe Costing

An important skill for anyone in the food industry is determining the cost of ingredients to prepare a food item and the price of items on a menu.

How to find the price of an ingredient portion

There are three basic steps to this process. The first and third are easiest, while the second requires more thinking and can vary a bit depending on the information you have to work with.

Step 1: Calculate the FACTOR using the yield %. The factor is used to correct the As Purchased (AP) cost to the Edible Portion (EP) cost. Because some food items require trimming, peeling, coring, etc – for a purchased amount, the edible portion is smaller.

$$\text{FACTOR} = 100 \div \text{Yield \%}$$

(round the factor to 3 decimal places, if necessary)

Step 2: Calculate the EDIBLE PRODUCT COST. The EP cost will be the same as the AP cost when the yield is 100%. For any food item with a yield of less than 100%, we must correct AP cost to account for wastage; the EP cost will always be GREATER than the AP cost when the yield is less than 100%.

EP PRODUCT Cost: The price paid for the edible product

Formula: $\text{AP product cost} \times \text{Factor} = \text{EP product cost}$

Example: A 10 lb bag of apples costs \$5.60. The yield percentage of apples is 75%. Find the EP product cost.

Solution: $\text{Factor} = 100 \div \text{Yield \%} = 100 \div 75 = 1.333$
 $\text{EP Cost} = \$5.60 \times 1.333 = \7.465 for 10 lb apples

Step 3: Calculate the EP Unit Cost. In this step we convert the edible product cost above into units that match the portion size given. In other words, we want to know the price paid per edible unit of item. If the portion size is in grams, the EP unit cost should be in \$ per gram.

Formula: $\text{Edible product cost} \div \text{number of units} = \text{unit cost}$
 Round to 3 decimal places

Example: If a 20 lb bag of flour costs \$10.50, what is the unit price of flour?

Solution: $\$10.50 \div 20 \text{ lb} = \$0.525/\text{lb}$

If an item is priced by the dozen or the case, an extra step is needed to find the unit price of an item by weight.

Example: A dozen eggs cost \$4.99. What is the price per egg?

Solution: $\text{Total cost} \div \text{number of units} = \text{unit cost}$
 $\$4.99 \div 12 \text{ eggs} = \$0.42/\text{egg}$



Example: A case of cabbage contains 24 heads of cabbage and costs \$12.50. Each head of cabbage weighs 1 kg. What is the unit cost per g for cabbage?

Solution: $\$12.50/\text{case} = \$12.50 \div 24 \text{ heads} = \0.52 per head
 $\$0.52 \text{ per head} = \$0.52 \div 1000 \text{ g} = \$0.0005/\text{g}$

Step 4: Calculate the PORTION PRICE by multiplying the EDIBLE PORTION UNIT COST by the PORTION SIZE. (This should be familiar — if we go the grocery store and we see that apples cost \$1.25 per kg and we buy 2 kg, we multiply 2 kg by \$1.25 to figure out the total cost). The Portion Price should be rounded to two decimal places.

EP Unit Cost	Portion Size	Action
Lettuce \$0.0009/g	260 g	$\$0.0009/\text{g} \times 260 \text{ g} = \0.23
Green onion \$0.008/g	15 g	$\$0.008/\text{g} \times 15 \text{ g} = \0.12
Lemon wedge \$0.005 each	1/6	$\$0.005/\text{g} \times 90 \text{ g} = \0.45

How to find the menu price of an item

Step 1: Find the FACTOR based on the food cost % (just like above with yield %).
 $100 \div \text{Food Cost \%} = \text{Menu price factor}$

Step 2: Multiply the total portion cost by the menu price factor to find the menu (or selling) price.

Example: If the food cost % is 40% and the total portion cost is \$2.35, what should the selling price be?

Solution: $\text{Factor} = 100 \div 40\% = 2.5$
 $2.5 \times \$2.35 = \5.88 should be the selling price

Note, ALWAYS check to see how many portions the recipe makes. If it makes multiple portions, you will need to divide the selling price by how many portions it makes.



Practice Problems

1. Fill in the table below and find what the selling price of the item should be:

Ingredient	Yield %	Factor	A.P. Cost	Unit Cost	Portion Size	Portion Cost
Green cabbage	80%		\$10.00 cs (24 heads)		1/8	
Zucchini	96%		\$14.50 cs (12 – 210 g each)		125 g	
Tomatoes	80%		\$1.25 – L		250 mL	
Olives	70%		\$0.89 – 170 g		20 g	
Chili	100%		\$13.95 – 567 g		0.57 g	
Stew beef	75%		\$6.99 – kg		180 g	
Food Cost %		35%	Total Recipe Cost:		Menu Price:	

2. *The recipe below for asparagus and sundried tomato salad yields 8 portions.*

Ingredient	Yield %	Factor	A.P. Cost	Unit Cost	Portion Size	Portion Cost
Asparagus	60%		\$7.00 – kg		0.45 kg	
Garlic	92%		\$0.65 head (8 cloves)		2 cloves	
Vegetable oil	100%		\$10.79 – 4L		250 mL	
Sun dried tomatoes in oil	85%		\$25.20 – kg		227 g	
Shiitake mushrooms	90%		\$15.37 – kg		113 g	
Salt	100%		\$0.87 – kg		5 g	
Thyme leaves, dried	100%		\$28.50 – 453 g		7 g	
Food Cost %		35%	Total Recipe Cost:			

What is the cost of one portion?

What is the selling price of one portion?



Answers

1.

Ingredient	Yield %	Factor	A.P. Cost	Unit Cost	Portion Size	Portion Cost
Green cabbage	80%	1.25	\$10.00 cs (24 heads)	\$0.521	1/8	\$0.07
Zucchini	96%	1.042	\$14.50 cs (12 – 210 g each)	\$0.006	125 g	\$0.75
Tomatoes	80%	1.25	\$1.25 - L	\$0.002	250 mL	\$0.50
Olives	70%	1.429	\$0.89 – 170 g	\$0.007	20 g	\$0.14
Chili	100%	1	\$13.95 – 567 g	\$0.025	0.57 oz	\$0.01
Stew beef	75%	1.333	\$6.99 - kg	\$0.009	180 g	\$1.62
Food Cost %		35%	Total Recipe Cost: \$3.09		Menu Price: \$8.83	

2.

Ingredient	Yield %	Factor	A.P. Cost	Unit Cost	Portion Size	Portion Cost
Asparagus	60%	1.667	\$7.00 - kg	\$11.669	0.45 kg	\$5.25
Garlic	92%	1.087	\$0.65 head (8 cloves)	\$0.088	2 cloves	\$0.18
Vegetable oil	100%	1	\$10.79 - 4L	\$0.003	250 mL	\$0.75
Sun dried tomatoes in oil	85%	1.176	\$25.20 - kg	\$0.030	227 g	\$6.81
Shiitake mushrooms	90%	1.111	\$15.37 - kg	\$0.017	113 g	\$1.92
Salt	100%	1	\$0.87 - kg	\$0.001	5 g	\$0.01
Thyme leaves, dried	100%	1	\$28.50 – 453 g	\$0.063	7 g	\$0.44
Food Cost %		35%	Total Recipe Cost: \$15.36			

Recipe cost of one portion = $\$15.36 \div 8 = \1.92

Menu price for one portion = \$5.49

