

# Culinary Institute of America

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Menus used in the dining room give both the waitstaff and guests important information about what your establishment offers, and your recipes give detailed instructions to aid kitchen staff in producing those menu items. More importantly, carefully designed menu and comprehensive recipes can assist the professional chef in streamlining kitchen operations and controlling costs.

The concepts explored in "Kitchen Calculations"

## EDIBLE PORTION QUANTITY EPQ

The weight, volume, or count of the product after it has been cleaned, peeled, or prepared (fabricated) and is ready for use. The word edible signifies the condition of the product as ready for use in the dish you are going to prepare within your operation.

### Trim

The weight or volume of the waste. This factor can be determined mathematically as the difference between APQ and EPQ.

$$APQ - EPQ = \text{Trim}$$

Example: The edible portion of a cleaned bag of 50# of potatoes would be the EPQ and would weigh in at approximately 42.5 pounds.

$$50 \text{ lbs} - 42.5 \text{ lbs} = 7.5 \text{ lbs (trim)}$$

Tip: Not all trim is loss; if the trim is usable, then it is not loss. For example, if the potato peels can be used in a vegetable stock for soup, they would not be considered trim.

Utilizing the trim will make a kitchen run more cost-effectively; however, the value of the skins may be so small that it might not be worth allocating this cost to the ultimate recipe.

## YIELD PERCENTAGE

The percentage of the as-purchased quantity that is edible. There are three major applications for yield percentage.

1. Computing the minimum amount to order
2. Recipe costing
3. Determining the maximum number of servings that a purchased amount will yield

Yield 4ed amount will yield



Anise  
Apples

75

Melons:



# COST CALCULATIONS

**Calculating As-Purchased Cost:** After the cost per unit has been calculated, the total cost formula needs to be applied to determine how much an ingredient in a particular recipe is costing your operation.

$$\text{As-Purchased Cost} = \text{Number of Units} \times \text{Cost per Unit}$$

Example: Your operation's Chicken Tarragon recipe calls for 1-½ teaspoons of dried tarragon leaves. One tablespoon of tarragon weighs .08 ounces. Your operation purchases tarragon in 4-ounce jars for \$5.77 per jar. How much will the tarragon cost for this particular recipe?

To determine the cost of the tarragon, we will use the 7-Steps of US

## EDIBLE PORTION COSTS

There is a substantial amount of math involved in calculating the cost of ingredients you will be using in your kitchen. It is imperative that you and your employees master this skill so that you can correctly determine the costs of your menu items and ultimately their selling prices.

As we have learned, the cost of the fruits or vegetables you are using in the recipes you prepare in your operation must include the cost of the trim, or else you will underestimate the expenses.

The following are some basic formulas and tips to calculating edible portion costs, so your business can capitalize their kitchen costs.

### AS PURCHASED COST APC

The cost paid to your supplier for the non-fabricated (uncleaned) fruits or vegetables you purchase.

### EDIBLE PORTION COST EPC

The cost per unit of the fabricated (cleaned) fruit or vegetable. The EPC accounts not only for the cost of the fabricated product but also for the cost of the trim.

Edible Portion Cost:

Cost Per Unit:  $\text{As-Purchased Cost} / \text{Number of Units}$

$\$1.08 / 1.5 \text{ pounds} = \$.72 \text{ per pound}$

3. Find the Yield Percentage

The Yield Percentage for broccoli is given at 61%

4. Substitute the As-Purchased Cost and the Yield percentage into the Edible Portion Cost formula and calculate

The Yield Percentage for broccoli is given at 61%

*Edible Portion Cost:*  $\text{As-Purchased Cost} / \text{Yield \% (in decimal form)}$

$.72 \text{ per pound} / .61 = \$1.181 \text{ per pound, or } \$1.19$

5. Check your work to insure that your answer is reasonable

Tip: When a fruit or vegetable is bought already cleaned, the price will include the trim loss, extra packaging, and labor, among other costs. This makes the cost of a cleaned product greater than the cost of an uncleaned product. (Tip: Among other costs:



Since we have determined the Edible Portion Cost, we can now calculate for total cost and determine how much the cup of chopped basil will cost.

1. Calculate the Edible Portion Cost (EPC)

The EPC has been determined to be \$.5642 per ounce

2. Perform the calculations needed so that the EPQ and EPC are the same unit

The cost is in ounces, so using the Bridge Method, we will convert the cup of basil to ounces

$$1 \text{ cup}/1 \times 16 \text{ tablespoons}/1 \text{ cup} = 16 \text{ tablespoons}/1 \times .09 \text{ ounces}/.56 =$$

1.44 ounces

3. Substitute the numbers in the Total Cost Formula

*Total Cost:* Edible Portion Quantity x Edible Portion Cost per Unit

$$.1.44 \text{ ounces} \times \$.5642 \text{ per ounce} = \$.812$$

4. Round any partial pennies up to the next higher cent

The cost of a cup of chopped fresh basil is \$.8124 or \$.82

5. Check your work to insure that your answer is reasonable

Tip: Many products have a 100% yield, such as our, sugar, dried spices, wines, spirits, syrups, and processed foods. The Edible Portion Cost may still be computed for these products, but you would divide by 1 (the decimal form of 100%). And as a result, the Edible Portion Cost and the As-Purchased Costs are the same.

## FINDING THE COST OF MEAT AND POULTRY

When determining the cost of the meat or poultry that you fabricate, the terminology changes. For meat and poultry, the terms **New Fabricated Cost** and **New Fabricated Price per Pound** are used instead of **Edible Portion Cost**.

The **New Fabricated Price Per Pound** recognizes the value of the trim that results from the fabrication process. Unlike fruits and vegetables, the trim for meat and poultry has a greater value, which needs to be accounted for when calculating the **New Fabricated Price Per Pound**.

$$\text{New Fabricated Price per Pound} = \text{New Fabricated Cost}/\text{New Fabricated Weight}$$

Example: You operation has purchased a rib that weighs 36.9 pounds. The fat weighed 8 pounds, the bones weighed 7.3 pounds, and the usable trim weighed 8.7 pounds. The entire rib was originally purchased for \$2.03 per pound, resulting in a **New Fabricated Weight** of 28.2 pounds. The **As-Purchased Cost** was calculated by multiplying the **As-Purchased Weight** by the **As-Purchased** price per pound (36.9 x \$2.03 = \$74.91).

We will use the following 4-Step Process to determine the **New Fabricated Price per Pound**.

1. To determine the value of the trim, check the current market prices with your purveyor

This example is based on the following prices:

Fat = \$0.02 per pound

Bones = \$0.46 per pound

Usable Trim = \$2.45 per pound

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## RECIPE COSTING

Controlling food costs is imperative in the restaurant business. If costs are not controlled successfully, no matter how good your food may be or how many loyal customers you have, your business cannot survive.

Excellence in the culinary arts is just one of the many skills needed to be successful in the foodservice industry. The importance of recipe costing cannot be overlooked.

Recipe costing is the basis of good food cost control. The following are some basic formulas and tips to achieving a pro table bottom-line.

### FOOD COST PERCENTAGE FC%

The percentage of the selling prices that pays for the ingredients. The formulas for the food cost percentage are:

Example :

# FOOD COST FORM

Menu Item \_\_\_\_\_ Date \_\_\_\_\_

Number of Portions \_\_\_\_\_ Size \_\_\_\_\_

Cost per Portion \_\_\_\_\_ Selling Price \_\_\_\_\_ Food Cost % \_\_\_\_\_

Ingredients	Recipe Quantity (EP)			Cost			Total
	Weight	Volume	Count	APC/Unit	Yield %	EPC/Unit	Cost

MENU ITEM	The name of the recipe identified as accurately as possible, using a menu number if necessary.
DATE	The day, month, and year the cost was calculated. This can be important for later analysis.
NUMBER OF PORTIONS	The number of portions the recipe makes or yields.
SIZE	The portion size normally served. This applies to menu items and is generally given in the recipe; it is not calculated.
COST PER PORTION	The cost of each serving. It is the total recipe cost divided by the number of portions.
SELLING PRICE	Based on the food cost percentage allowed by the budget. It is the cost per portion divided by the food cost percentage (in decimal form).
FOOD COST %	An expression of food cost in relation to the selling price. It is the cost per portion divided by the selling price.
INGREDIENTS	All the food items that make up the recipe, including specific sizes or ID numbers.
RECIPE QUANTITY	This will be listed by weight, volume, or count depending on the recipe. The recipe quantity is usually the edible portion quantity with some exceptions. Recipe quantity is recorded in one of three ways: <ul style="list-style-type: none"> <li>• Weight (pounds, ounces, grams, etc.)</li> <li>• Volume (cups, pints, tablespoons etc.)</li> <li>• Count (each, bunch, case, etc.)</li> </ul>
APC/Unit	The as-purchased cost per unit is the current market price or the as-purchased price, and the unit upon which price is based.
YIELD %	Many foods are not purchased already cleaned, and with these, some waste (trim) is expected. The yield percentage is used to adjust the as-purchased cost to compensate for trim loss.
EPC/Unit	Edible portion cost per unit is the cost per unit of the fabricated fruit or vegetable. This cost accounts not only for the cost of the fabricated product but also for the trim loss. This is calculated by dividing the APC by the yield percentage. If there is no waste or trim, the yield percent column may be left blank.
TOTAL COST	The total cost of each ingredient used.
TOTAL RECIPE COST	The sum of all items in the total cost column. This represents the total estimated cost of the recipe.