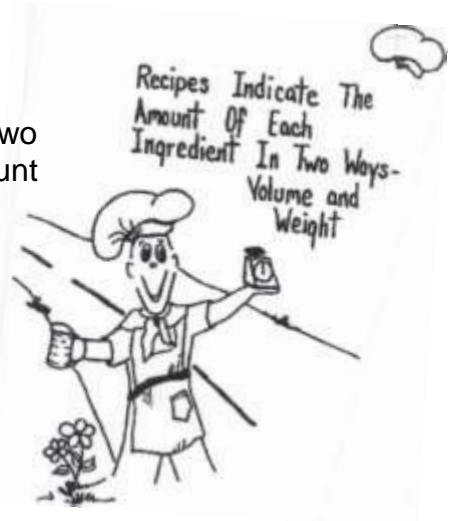


Weights and Measures

Section 13-2 Culinary Essentials

Measures of Volume

Recipes indicate the amount of each ingredient to use in two ways – by volume and by weight. Volume refers to the amount of space an ingredient occupies in a measuring container. Both weight and volume measures are listed for most ingredients on each recipe.



We use volume to measure mainly liquid ingredients and ingredients less than two ounces. We will be discussing seven measures of volume commonly used in food service.

Question: can you name the seven measures of volume?

The seven measures of volume are: teaspoon, tablespoon, fluid ounce, cup, pint, litre, quarts.

We need to keep in mind that ounce is a measure of both volume and weight.

Remember that when it is written:

Fluid ounce or fl. oz., it is volume

And

Ounce or oz., it is weight

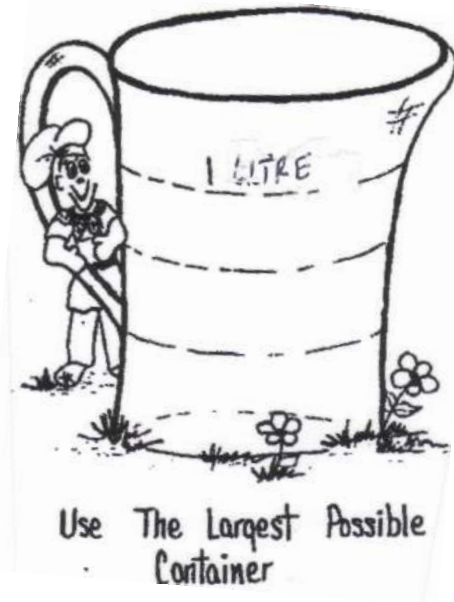


We should always measure ingredients in the largest possible container. The fewer times an ingredient is measured, the less chance there is for error. For example, it is more accurate to measure one cup of milk than it is to measure sixteen tablespoons of milk. Common measures of volume are equal to other measures.

Some examples are the following:

2 cups (1 pint) = 470 ml
4 cups (1 quart) = .95 litre
4 quarts (1 gal.) = 3.8 litres

5 ml = 1 teaspoon
15 ml = 1 tablespoon
34 ml = 1 fluid oz.
100 ml = 3.4 fluid oz.
240 ml = 1 cup
1 litre = 34 fluid oz.
1 litre = 4.cups
1 litre = 2.pints
1 litre = 1.06 quarts
1 litre = .26 gallon



Standard measuring equipment should always be used when preparing food because it helps us measure the right amount of each ingredient. Our success in food preparation depends on our having the correct amount of each ingredient in the recipe.

The equipment used to measure volume includes measuring spoons, dry measuring containers, and liquid measuring containers. Measuring spoons are used to measure small amounts of ingredients such as seasonings, spices, herbs, and flavorings. Although we use larger measures more often, it is necessary to be familiar with the smaller measures.

A standard set of measuring spoons consists of:

1/4 teaspoon,
1/2 teaspoon,
1 teaspoon, and
1 tablespoon.



Nested measuring cups are used to measure small amounts of dry and solid ingredients such as salt, brown sugar, yeast, flour, solid shortening, etc. Dry measuring cups and graduated measures do not have a lip above the fill line, so the ingredient can be levelled. They are usually made of heavy weight aluminum or stainless steel.

A set of nested measuring cups usually includes*

1/4 cup, 1/3 cup, 1/2 cup, and 1 cup.



In addition to using the right measuring equipment, it is important for us to follow correct techniques for measuring. We need to apply some basic rules for measuring different types of ingredients.

Rules to follow when measuring dry ingredients:*

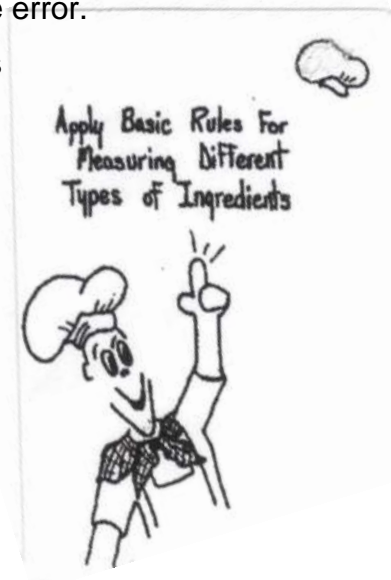
- ✦ Use standard measuring equipment.
- ✦ Use the largest appropriate measure to save time and to reduce error.

Exception: To measure flour, do not use a container larger than 4 cups because flour packs easily.

- ✦ Spoon ingredient lightly into the measuring container. (If lumpy, sift before measuring.)

Exception: Pack brown sugar firmly into the measuring container so it will take the shape of the container when emptied.

- ✦ Fill the measuring container to overflowing and level off with, a straight-edged spatula.
- ✦ Avoid shaking or tapping measuring container.



The techniques for measuring liquids are basically the same for all liquid ingredients.

Rules to follow when measuring liquid ingredients:*

- ✦ Use the largest appropriate standard measuring container.
- ✦ Place liquid measuring container on a flat surface.
- ✦ Pour liquid into the container until it reaches the desired level.
- ✦ Read at eye level when using a glass or a clear container.
- ✦ Look inside the container as the liquid is filled to the desired level if using a metal container



RULES FOR MEASURING INGREDIENTS

Rules to follow when measuring dry ingredients:

- ✦ Use standard measuring equipment.
- ✦ Use the largest appropriate measure to save time and to reduce error.
- ✦

Exception: To measure flour, do not use a container larger than four cups because flour packs easily.

- ✦ Spoon ingredient lightly into the measuring container. (If lumpy, sift before measuring.)

Exception: Pack brown sugar firmly into the measuring container so it will take the shape of the container when emptied.

- ✦ Fill the measuring container to overflowing and level off with a straight-edged spatula.
- ✦ Avoid shaking or tapping measuring container.

Rules to follow when measuring liquid ingredients:

- ✦ Use the largest appropriate standard measuring container.
- ✦ Place liquid measuring container on a flat surface.
- ✦ Pour liquid into the container until it reaches the desired level.
- ✦ Read at eye level when using a glass or a clear polycarbonate container.
- ✦ If a metal container is used, look inside the container as the liquid is filled to the desired level.

It is easier to weigh peanut butter and solid fat such as butter and shortening. When it is necessary to measure these ingredients, they should be pressed firmly into the measuring container and levelled off with a straight-edged spatula.

