## - Chapter 12 -

## Measurements and

 ConversionsBecause this website was created by an American company, lengths, weights, temperatures, and liquid volume measurements are given in inches, pounds and ounces, degrees Fahrenheit, and quarts and cups (U.S. version). If you deal in another measurement system, this chapter will help make the conversion.

## Abbreviations

$$
\begin{aligned}
& \text { U.S. } \\
& \mathrm{oz}=\text { ounce } \\
& \mathrm{lb}=\text { pound } \\
& \mathrm{t}=\text { teaspoon (also tsp) } \\
& \mathrm{T}=\text { tablespoon (also tbsp) } \\
& \mathrm{c}=\text { cup } \\
& \mathrm{pt}=\text { pint } \\
& \mathrm{qt}=\text { quart } \\
& \text { gal }=\text { gallon } \\
& \text { in }=\text { inches (also " }) \\
& \mathrm{ft}=\text { feet } \\
& \text { yd }=\text { yard } \\
& \mathrm{F}=\text { Fahrenheit }
\end{aligned}
$$

## Metric

$\mathrm{g}=$ gram (also gm)
$\mathrm{kg}=$ kilogram (kilo)
$\mathrm{ml}=$ milliliter
$\mathrm{cl}=$ centiliter
$\mathrm{I}=$ liter (also L)
$\mathrm{mm}=$ millimeter
$\mathrm{cm}=$ centimeter
$\mathrm{m}=$ meter
C = Celsius (Centigrade)

## Liquid Volume Equivalents

For liquid volume measurements (U.S. version), here's two charts of equivalent amounts that can be handy when reducing or expanding recipes.

Small "t" = teaspoon. Capital "T" = tablespoon.

$$
\begin{array}{rlrl}
\text { VOLUME-TO-VOLUME } & \text { VOLUME-TO-WEIGHT* } \\
3 \mathrm{t} & =1 \mathrm{~T} & 1 / 4 \mathrm{t} & =1 / 24 \mathrm{fluid} \text { ounce } \\
16 \mathrm{~T} & =1 \mathrm{c} & 1 / 2 \mathrm{t} & =1 / 12 \mathrm{fl} \mathrm{oz} \\
2 \mathrm{c} & =1 \mathrm{pt} & 1 \mathrm{t} & =1 / 6 \mathrm{fl} \mathrm{oz} \\
2 \mathrm{pt} & =1 \mathrm{qt} & 1 \mathrm{~T} & =1 / 2 \mathrm{fl} \mathrm{oz}(2 \mathrm{~T}=1 \mathrm{fl} \mathrm{oz}) \\
4 \mathrm{qt} & =1 \mathrm{gal} & 1 \mathrm{c} & =8 \mathrm{fl} \mathrm{oz} \\
& 1 \mathrm{pt} & =16 \mathrm{fl} \mathrm{oz} \\
& 1 \mathrm{qt} & =32 \mathrm{fl} \mathrm{oz} \\
& 1 \mathrm{gal} & =128 \mathrm{fl} \mathrm{oz} \\
& * U . S . ~ q u a n t i t i e s ~
\end{array}
$$

A U.S. fluid ounce is equivalent to $1 / 8$ cup of water.

## Factor for Converting U.S. to British

Americans and British still use teaspoon, tablespoon, cup, pint, quart, and gallon measurements, but the two systems aren't the same. British units are $\mathbf{1 . 2}$ times larger than American.

To convert an American recipe to British units, multiply the U.S. liquid measures by $\mathbf{0 . 8 3}$ (the same as dividing by 1.2).

To convert a British recipe to U.S. units, multiply the British liquid measures by 1.2 .

Those rules apply to liquid volumes but not to the fluid ounce. The U.S. fluid ounce is $1 / 8$ cup; the British is $1 / 10$ cup. This makes the U.S. and British fluid ounce almost the equal.

## Factors for Converting U.S. to Metric

All countries except the U.S. and Britain use metric measurements exclusively. To convert U.S. and British measurements to the metric system, and vice versa, apply these rules.

| WHEN YOU KNOW | You CAN FIND | IF YOU MULTIPLY BY |
| :---: | :---: | :---: |
| ounces | grams | 28 (specifically 28.35 ) |
| pounds | kilograms | 0.453 |
| grams | ounces | 0.035 |
| kilograms | pounds | 2.22 |
| teaspoons | milliliters | 5 |
| tablespoons | milliliters | 15 |
| cups (U.S.) | liters | 0.24 |
| pints (U.S.) | liters | 0.47 |
| quarts (U.S.) | liters | 0.95 |
| gallons (U.S.) | liters | 3.79 |
| millimeters | teaspoons | 0.2 |
| millimeters | tablespoons | 0.07 |
| liters | cups | 4.23 U.S. 3.49 Brit. |
| liters | pints | 2.11 U.S. 1.74 Brit. |
| liters | quarts | 1.06 U.S. 0.88 Brit. |
| liters | gallons | 0.26 U.S. 0.22 Brit. |
| inches | millimeters | 25.4 |
| feet | centimeters | 30.5 |
| yards | meters | 0.91 |
| millimeters | inches | 0.04 |
| centimeters | feet | 0.033 |
| meters | yards | 1.1 |
| degrees Fahrenheit | degrees Celsius* | 0.55 (after subtracting 32) |
| degrees Celsius* | degrees Fahrenheit | 1.8 (then add 32) |
| *Celsius is also know | as Centigrade |  |

## Temperature Scale

For converting Fahrenheit (F) temperature to Celsius (C), use this scale.

$$
\begin{aligned}
0^{\circ} \mathrm{F} & =-18^{\circ} \mathrm{C} \\
5^{\circ} \mathrm{F} & =-15^{\circ} \mathrm{C} \\
10^{\circ} \mathrm{F} & =-12^{\circ} \mathrm{C} \\
15^{\circ} \mathrm{F} & =-9^{\circ} \mathrm{C} \\
20^{\circ} \mathrm{F} & =-7^{\circ} \mathrm{C} \\
25^{\circ} \mathrm{F} & =-4^{\circ} \mathrm{C} \\
30^{\circ} \mathrm{F} & =-1^{\circ} \mathrm{C} \\
32^{\circ} \mathrm{F} & =0^{\circ} \mathrm{C} \\
35^{\circ} \mathrm{F} & =2^{\circ} \mathrm{C} \\
40^{\circ} \mathrm{F} & =4^{\circ} \mathrm{C} \\
45^{\circ} \mathrm{F} & =7^{\circ} \mathrm{C} \\
50^{\circ} \mathrm{F} & =10^{\circ} \mathrm{C} \\
55^{\circ} \mathrm{F} & =13^{\circ} \mathrm{C} \\
60^{\circ} \mathrm{F} & =16^{\circ} \mathrm{C} \\
65^{\circ} \mathrm{F} & =18^{\circ} \mathrm{C} \\
70^{\circ} \mathrm{F} & =21^{\circ} \mathrm{C} \\
75^{\circ} \mathrm{F} & =24^{\circ} \mathrm{C} \\
80^{\circ} \mathrm{F} & =27^{\circ} \mathrm{C} \\
85^{\circ} \mathrm{F} & =29^{\circ} \mathrm{C} \\
90^{\circ} \mathrm{F} & =32^{\circ} \mathrm{C} \\
95^{\circ} \mathrm{F} & =35^{\circ} \mathrm{C}
\end{aligned}
$$

## Weight Scale

For converting ounces (oz) and pounds (lb) into grams (g) and kilograms (kg), use this scale.

$$
\begin{aligned}
& 1 / 8 \mathrm{oz}=3.5 \mathrm{~g} \\
& 1 / 4 \mathrm{oz}=7 \mathrm{~g} \\
& 1 / 2 \mathrm{oz}=14 \mathrm{~g} \\
& 3 / 4 \mathrm{oz}=21 \mathrm{~g} \\
& 1 \mathrm{oz}=28 \mathrm{~g} \\
& 2 \mathrm{oz}=57 \mathrm{~g} \\
& 3 \mathrm{oz}=85 \mathrm{~g} \\
& 4 \mathrm{oz}=114 \mathrm{~g} \\
& 5 \mathrm{oz}=142 \mathrm{~g} \\
& 6 \mathrm{oz}=170 \mathrm{~g} \\
& 7 \mathrm{oz}=199 \mathrm{~g} \\
& 8 \mathrm{oz}=226 \mathrm{~g} \\
& 9 \mathrm{oz}=254 \mathrm{~g} \\
& 10 \mathrm{oz}=283 \mathrm{~g} \\
& 11 \text { oz = } 311 \mathrm{~g} \\
& 12 \mathrm{oz}=340 \mathrm{~g} \\
& 13 \mathrm{oz}=368 \mathrm{~g} \\
& 15 \mathrm{oz}=425 \mathrm{~g} \\
& 1 \mathrm{lb}=453 \mathrm{~g} \\
& 2 \mathrm{lb}=905 \mathrm{~g} \\
& 2.2 \mathrm{lb}=1 \mathrm{~kg} \\
& 3 \mathrm{lb}=1.35 \mathrm{~kg} \\
& 4 \mathrm{lb}=1.81 \mathrm{~kg} \\
& 5 \mathrm{lb}=2.27 \mathrm{~kg} \\
& 10 \mathrm{lb}=4.53 \mathrm{~kg} \\
& 15 \mathrm{lb}=6.8 \mathrm{~kg} \\
& 20 \mathrm{lb}=9.1 \mathrm{~kg} \\
& 25 \mathrm{lb}=11.3 \mathrm{~kg} \\
& 30 \mathrm{lb}=13.6 \mathrm{~kg} \\
& 35 \mathrm{lb}=15.9 \mathrm{~kg} \\
& 40 \mathrm{lb}=18.1 \mathrm{~kg} \\
& 45 \mathrm{lb}=20.4 \mathrm{~kg} \\
& 50 \mathrm{lb}=22.7 \mathrm{~kg} \\
& 100 \mathrm{lb}=45.3 \mathrm{~kg} \\
& 14 \mathrm{oz}=396 \mathrm{~g}
\end{aligned}
$$

