



## Liquid Measure

gal. =	qt. =	pt. =	cups =	fl. oz. =	L =	Tbsp. =	tsp.
1 gal.	4 qt.	8 pt.	16 cups	128 fl. oz.	3.8 L		
1/2 gal.	2 qt.	4 pt.	8 cups	64 fl. oz.	1.89 L		
1/4 gal.	1 qt.	2 pt.	4 cups	32 fl. oz.	.95 L		
	1/2 qt.	1 pt.	2 cups	16 fl. oz.	.47 L		
	1/4 qt.	1/2 pt.	1 cup	8 fl. oz.	.24 L		
			1/2 cup	4 fl. oz.	.12 L	8 Tbsp.	24 tsp.
			1/4 cup	2 fl. oz.	.06 L	4 Tbsp.	12 tsp.
			1/8 cup	1 fl. oz.	.03 L	2 Tbsp.	6 tsp.
				1/2 fl. oz.	.015 L	1 Tbsp.	3 tsp.

### Conversion Factors

- ounces to milliliters: multiply ounce figure by 30 to get number of milliliters
- cups to liters: multiply cup figure by 0.24 to get number of liters



## Dry Measure

cups =	fluid oz. =	Tbsp. =	tsp. =	ml
1 cup	8 fluid oz.	16 Tbsp.	48 tsp.	237 ml
3/4 cup	6 fluid oz.	12 Tbsp.	36 tsp.	177 ml
2/3 cup	5 1/3 fluid oz.	10 2/3 Tbsp.	32 tsp.	158 ml
1/2 cup	4 fluid oz.	8 Tbsp.	24 tsp.	118 ml
1/3 cup	2 2/3 fluid oz.	5 1/3 Tbsp.	16 tsp.	79 ml
1/4 cup	2 fluid oz.	4 Tbsp.	12 tsp.	59 ml
1/8 cup	1 fluid oz.	2 Tbsp.	6 tsp.	30 ml
1/16 cup	1/2 fluid oz.	1 Tbsp.	3 tsp.	15 ml
1/48 cup	1/8 fluid oz.	1/3 Tbsp.	1 tsp.	5 ml

### Conversion Factors

- ounces to milliliters: multiply ounce figure by 30 to get number of milliliters
- cups to liters: multiply cup figure by 0.24 to get number of liters



## Oven Temperatures

Description =	American Standard =	Metric =	Gas Mark
very cool	225° F	110° C	mark # 1/4
lukewarm cool	250° F	130° C	mark # 1/2
cool	275° F	140° C	mark # 1
coolly moderate	300° F	150° C	mark # 2
very moderate	325° F	170° C	mark # 3
moderate	350° F	180° C	mark # 4
moderately hot	375° F	190° C	mark # 5
fairly hot	400° F	200° C	mark # 6
hot	425° F	220° C	mark # 7
really hot	450° F	230° C	mark # 8
very hot	475° F	240° C	mark # 9

### Conversion Factors

- Fahrenheit to Celsius: subtract 32 from the Fahrenheit figure, multiply by 5, then divide by 9 to get Celsius
- Celsius to Fahrenheit: multiply Celsius figure by 9, divide by 5, then add 32 to get Fahrenheit



## Butter or Margarine to Olive Oil Conversion for Baking

Butter/Margarine =	Olive Oil
1 teaspoon	3/4 teaspoon
1 tablespoon	2 1/4 teaspoons
2 tablespoons	1 1/2 tablespoons
1/4 cup	3 tablespoons
1/3 cup	1/4 cup
1/2 cup	1/4 cup + 2 tablespoons
2/3 cup	1/2 cup
3/4 cup	1/2 cup + 1 tablespoon
1 cup	3/4 cup



## Teaspoon-Gallon Measures

1 teaspoon =	1 1/3 fluid drams
1 tablespoon =	3 teaspoons
1/4 cup =	4 tablespoons
1/3 cup =	5 tablespoons + 1 teaspoon
1/2 cup =	8 tablespoons
2/3 cup =	1/2 cup + 2 tablespoons + 2 teaspoons
1 cup =	16 tablespoons
1 pint =	2 cups
1 quart =	4 cups
1 gallon =	4 quarts



## Common Can and Bottle Sizes

standard =	metric
3 ounces	85 ml
3 1/2 ounces	100 ml
5 1/2 ounces	156 ml
7 1/2 ounces	213 ml
8 ounces	227 ml
10 ounces	284 ml
12 ounces	340 ml
13 ounces	370 ml
14 ounces	398 ml
18 ounces	504 ml
19 ounces	532 ml
28 ounces	796 ml
4 1/4 cups	1 liter
6 cups	1.5 liters
8 cups	2 liters



## Commonly Used Substitutions

Ingredient	Quantity	Substitute
Baking Powder	1 tsp. double acting	1/4 tsp. baking soda + 1/2 cup buttermilk <i>or</i>
Baking Powder	1 tsp. double acting	1/4 tsp. baking soda + 1/2 tsp. cream of tartar
Butter	1 cup	1 cup margarine <i>or</i>
Butter	1 cup	7/8 cup lard + 1/2 tsp. salt
Chocolate	1 ounce	3 Tbsp. cocoa + 1 Tbsp. shortening
Corn Starch (for thickening)	1 Tbsp.	2 Tbsp. flour
Cream	1 cup	1/2 cup butter + 3/4 cup milk
Egg	1 whole	2 egg yolks
Flour	1 cup all purpose	1 cup + 2 Tbsp. cake flour
Flour	1 cup cake flour	7/8 cup all purpose flour
Flour	1 cup self-rising flour	1 cup flour (omit baking powder & salt)
Garlic	1 small clove	1/8 tsp. garlic powder
Herbs	1 Tbsp. fresh	1 tsp. dried
Honey	1 cup	1 1/4 cups sugar + 1/4 cup liquid
Milk, fresh whole	1 cup	1 cup reconstituted dry milk + 2 tsp. butter
Milk, whole	1 cup	1/2 cup evaporated milk + 1/2 cup water
Milk, sour	1 cup	1 Tbsp. lemon juice or vinegar + sweet milk to make 1 cup
Minced Dry Onion (hydrated)	1 Tbsp. instant	1 small fresh onion
Molasses	1 cup	1 cup honey
Mustard, prepared	1 Tbsp.	1 tsp. dry mustard
Ricotta Cheese	1 cup	1 cup cottage cheese + 1 Tbsp. skim milk
Sour Cream	1 cup	1 cup yogurt
Sugar, Brown	1 cup	3/4 cup granulated sugar + 1/4 cup molasses
Sugar, Powdered	1 1/3 cups	1 cup granulated sugar
Yogurt	1 cup	1 cup buttermilk



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## Canned Food Drain Weights

Item	Drain weight in OZ per #10 Can
Apples, Sliced . . . . .	96
Apricots, Halves/Slices in Heavy Syrup . . . . .	62
Apricots, Halves/Slices, LT Syrup/Juice/ H2O. . . . .	64
Apricots, Whole, Peeled, in Heavy Syrup . . . . .	60
Apricots, Whole, Peeled, in LT Syrup . . . . .	62
Asparagus, Center Cuts & Tips . . . . .	60
Beans, Garbanzo. . . . .	68
Beans, Green or Wax, 1.5" Cut . . . . .	60
Beans, Green or Wax, French Cut . . . . .	59
Beans, Green or Wax, Mixed or Short Cut . . . . .	63
Beans, Green or Wax, Whole . . . . .	58
Beans, Kidney . . . . .	68
Beans, Lima, Fresh . . . . .	72
Beans, Pinto . . . . .	68
Beets, Diced, 3/8" . . . . .	72
Beets, Julienne . . . . .	68
Beets, Sliced, Medium, 1/4" . . . . .	68
Beets, Whole, Size 1-3 . . . . .	69
Beets, Whole, Size 4-6 . . . . .	68
Blackberries, Heavy Pack in LT Syrup or H2O . . . . .	74
Blackberries, Regular Pack in Heavy Syrup . . . . .	62
Blueberries . . . . .	55
Blueberries, Heavy Pack in LT Syrup or H2O . . . . .	70
Boysenberry, Regular Pack in Heavy Syrup . . . . .	55
Carrots, Diced, 3/8" . . . . .	72
Carrots, Julienne. . . . .	68
Carrots, Sliced . . . . .	68
Carrots, Whole . . . . .	68
Cherries, Red, Tart, Pitted in Syrup . . . . .	70
Cherries, Red, Tart, Pitted in H2O or Juice . . . . .	72
Corn, Whole Kernel, GR A . . . . .	70
Corn, Whole Kernel, GR B & C . . . . .	72
Figs, Kadota, 70 Count or Less . . . . .	63
Fruit Cocktail . . . . .	71
Grapes, Light, Seedless. . . . .	62
Hominy, Whole, Style 1 . . . . .	72
Mushrooms, Stems & Pieces. . . . .	61
Olives, Ripe, Chopped . . . . .	90
Olives, Ripe, Pitted, Jumbo, Colossal . . . . .	64





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## Canned Food Drain Weights

Item	Drain weight in OZ per #10 Can
Olives, Ripe, Pitted, SM, MD, LG, XLG	66
Olives, Slices, Wedges, Quartered	55
Onions, Whole, 100-199 CT, Small	63
Onions, Whole, 200 CT, Tiny	64
Onions, Whole, 80-99 CT, Medium	60
Oranges, Mandarin	60
Peaches, Clingstone, Diced	70
Peaches, Clingstone, Halves	69
Peaches, Clingstone, Slices	68
Pears, Diced	67
Pears, Halves	63
Pears, Slices	66
Peas & Carrots	70
Peas, Field & Blackeye Peas	72
Peas, GR A	70
Peas, GR B	72
Pimentos, Diced, Chopped	74
Pimentos, Pieces	74
Pimentos, Whole	72
Pineapple, Chunks	66
Pineapple, Cubes	71
Pineapple, Tidbits	66
Pineapple, Crushed in Syrup	69
Pineapple, Sliced	62
Plums, Purple, Halves	60
Plums, Purple, Whole	55
Potatoes, Sweet	73
Potatoes, White, Diced	76
Potatoes, White, Sliced	75
Potatoes, White, Whole	74
Prunes	90
Raspberries, in H2O	60
Raspberries, in Syrup	53
Sauerkraut	80
Spinach, Canned	58
Tomatoes, Whole, Peeled	58

## Dry Spice Conversions

Item	FL OZ per OZ	TSP per OZ	TBL per OZ
Ajwain	3.3	20	6.67
Allspice, Ground	2.4	14.3	4.75
Anise, Ground	2	12	4
Anise Seeds	2.25	13.5	4.5
Annatto Power, Achioté	1.6	9.25	3.1
Basil, Ground	3	18	6
Bay Leaves	8.35	50	16.7
Bay Leaves, Ground	2.1	12.7	4.2
Caraway, Ground	2.5	15	5
Caraway Seed	1.95	11.7	3.9
Cardamom, Ground	2.4	14.5	4.8
Cayenne	2.25	13.5	4.5
Celery Salt	.95	5.7	1.9
Celery Seed	2.1	12.6	4.2
Celery Seed, Ground	2	12	4
Chervil Leaves	7.2	43	14.3
Chili Flakes, Red	2.8	17	5.67
Chili Powder	2.1	12.75	4.25
Chinese 5 Spice	2.1	12.75	4.25
Cinnamon	1.9	11.75	3.9
Cloves, Ground	2.2	13	4.3
Cloves, Whole	2.7	16	5.3
Coriander, Ground	2.4	14.33	4.8
Coriander Seeds	3.5	21	7
Cream of Tartar	1.25	7.5	2.5
Cumin, Ground	2.4	14.2	4.7
Curry Powder	2.2	13.2	4.4
Dextrose, Powdered	1.5	9	3
Dill Seed	2.2	13	4.3
Dill Weed	4.7	28.25	9.4
Epazote	5	30	10
Fennel, Ground	2.2	12.9	4.3
Fennel Seed	2.2	13	4.3
Fenugreek Seed	1.3	7.75	2.6
Fermento	2	12	4
Garlic, Granulated	1.4	8.5	2.8
Garlic Powder	1.75	10.7	3.5
Garlic Salt	1	6	2
Ginger	2.5	14.75	4.9

## Dry Spice Conversions

Item	FL OZ per OZ	TSP per OZ	TBL per OZ
Herbs De Provence	5.5	33	11
Kosher Salt	1.3	8	2.6
Mace	2.5	14.8	4.9
Marjoram	5.7	34	11.3
Mint Leaves	15	90	30
Mustard, Ground	2.3	14	4.6
Mustard Seeds	1.25	7.5	2.5
Nutmeg	2.05	12.4	4.1
Onion Powder	2.2	12.8	4.3
Oregano Leaves	4.7	28	9.3
Paprika	2.1	12.5	4.2
Parsley Flakes	11.7	70	23.3
Pepper, Black, Coarse	2.1	12.5	4.2
Pepper, Black, Ground	2	12	4
Pepper Flakes, Red, Crushed	2.9	17	5.7
Pepper, White Ground	1.95	11.5	3.9
Peppercorns, Black	1.75	10.5	3.5
Pickling Spice	1.5	9	3
Poppy Seed	1.65	10	3.3
Pumpkin Spice	2.65	16	5.3
Rosemary, Ground	2.05	17	5.7
Rosemary, Leaves	4.5	27	9
Saffron	6.7	40	13.3
Sage, Ground	5.5	33	11
Salt, Kosher, Morton	0.9	5.5	1.8
Salt, Seasoning	.97	5.85	1.95
Salt, Table	.79	4.74	1.58
Sesame Seeds	1.8	11	3.6
Tarragon Leaves	6.15	37	12.3
Thyme, Ground	1.9	11.25	3.75
Thyme, Leaves	3.5	21	7
Turmeric	2	12	4
Wasabi Powder	2.9	17.25	5.75

## Fruit Yields

Item	% Yield
Apples, Peeled & Cored . . . . .	74
Apricots . . . . .	92
Bananas . . . . .	66
Blackberries . . . . .	95
Blueberries . . . . .	89
Cantaloupe . . . . .	58
Cherries, Flesh . . . . .	87
Coconut, Meat . . . . .	43
Figs, Without Stem . . . . .	98
Grapefruit, Segments Without Membrane . . . . .	52
Grapes, Stemless . . . . .	93
Guava . . . . .	80
Kiwi . . . . .	84
Honeydew . . . . .	58
Lemon, Juiced & Strained . . . . .	42
Lime / Lemon Zest . . . . .	16
Limes, Juiced & Strained . . . . .	42
Mango, Without Pit & Skin . . . . .	69
Nectarines . . . . .	75
Oranges . . . . .	62
Papayas . . . . .	67
Peaches, Sliced . . . . .	78
Pears, Without Pit & Skin . . . . .	78
Pineapple, Peeled & Cored, Cubed . . . . .	46
Plantains . . . . .	72
Plums . . . . .	90
Pomegranates . . . . .	56
Prickly Pear Fruit . . . . .	69
Quince . . . . .	61
Raspberries . . . . .	96
Strawberries . . . . .	92
Tangerine . . . . .	71
Watermelon . . . . .	50

## Meat Yields

Item	% Yield
<b>BEEF</b>	
Chuck . . . . .	85
Flank . . . . .	90
Flap Meat . . . . .	80
Inside Round . . . . .	65
Neck . . . . .	75
Rib Chop . . . . .	83
Rump . . . . .	79
Shank Hind . . . . .	43
Shank Fore . . . . .	61
Shoulder Clod . . . . .	75
Short Ribs . . . . .	68
Sirloin Butt . . . . .	70
Sirloin Top Full Cut . . . . .	71
Steak Club . . . . .	83
Steak Porterhouse . . . . .	91
Steak T-Bone . . . . .	88
Tender PSMO . . . . .	75
Ribeye Steak Lip Off . . . . .	72
Ribeye Steak Lip On . . . . .	78
Strip Steak Center Cut . . . . .	80
Strip Steak End Cut . . . . .	63
Top Butt Steak Cap On . . . . .	52
Top Butt Steak Center Cut . . . . .	38
Peeled Tenderloin . . . . .	52
<b>LAMB</b>	
Breast & Flank . . . . .	89
Chop . . . . .	75
Foreleg . . . . .	70
Loin . . . . .	89
Rib . . . . .	81
Shoulder . . . . .	86

## Meat Yields

Item	% Yield
<b>PORK</b>	
Bacon . . . . .	93
Butt Boneless . . . . .	85
Chop . . . . .	75
Ham . . . . .	85
Picnic . . . . .	81
Shoulder . . . . .	81
Tenderloins . . . . .	88
<b>VEAL</b>	
Chuck . . . . .	80
Flank . . . . .	99
Fore Shank . . . . .	82
Leg, Boned & Trimmed . . . . .	44
Loin . . . . .	83
Plate . . . . .	79
Rib . . . . .	77
Round . . . . .	77
<b>CHICKEN</b>	
Broiler/Fryer Without Neck/Giblets . . . . .	89
Drum . . . . .	63
Thighs . . . . .	70
Wings . . . . .	50
Breast . . . . .	87
Breast Quarter . . . . .	75
Drum . . . . .	69
Leg . . . . .	75
Leg Quarter . . . . .	71
Thigh . . . . .	82
<b>DUCK</b>	
Dressed . . . . .	88
Legs . . . . .	24
Wings . . . . .	11

## Meat Yields

Item	% Yield
<b>TURKEY</b>	
Whole, Dressed . . . . .	90
<b>VENISON</b>	
Loin Chop . . . . .	75
<b>SEAFOOD</b>	
Bass, Without Skin Filet . . . . .	59
Clams, Edible Portion . . . . .	15
Cod, Filet Without Skin . . . . .	30
Crab, Blue From Shell . . . . .	17
Crab, Dungeness From Shell . . . . .	27
Crab, King From Shell . . . . .	25
Crawfish, Tail . . . . .	12
Crawfish, Back . . . . .	23
Flounder, Filet Without Skin . . . . .	41
Frog Legs, Flesh . . . . .	65
Halibut, Filet Without Skin . . . . .	59
Lobster, Meat Body Claw Tail . . . . .	28
Oyster, Meat & Liquor . . . . .	18
Snapper, Filet With Skin . . . . .	73
Salmon, Meat Boneless Raw . . . . .	88
Shrimp, Cleaned Without Shell . . . . .	81
Tilapia, Dressed Filet . . . . .	45
Trout, Filet Without Skin . . . . .	59

## Vegetable Yields

Item	% Yield
Alfalfa Sprouts . . . . .	95
Artichokes . . . . .	97
Arugula . . . . .	97
Asparagus, Standard Whole . . . . .	90
Avocado, Whole . . . . .	77
Bamboo Shoot, Sliced from Whole . . . . .	96
Bamboo Shoot, Sliced & Peeled . . . . .	72
Bean Sprouts . . . . .	97
Beans, Green . . . . .	88
Beets . . . . .	66
Belgian Endive . . . . .	83
Bok Choy, Baby . . . . .	92
Bok Choy, Regular . . . . .	88
Broccoli, Bunch, Whole . . . . .	63
Broccoli, Florets . . . . .	63
Brussels Sprouts . . . . .	89
Cabbage, Green . . . . .	80
Cabbage, Red . . . . .	80
Cabbage, Napa . . . . .	88
Cabbage, Savoy . . . . .	83
Carrots, Table, Medium . . . . .	81
Carrots, Whole Baby . . . . .	99
Cauliflower . . . . .	60
Celery . . . . .	69
Chard, Swiss . . . . .	91
Cilantro . . . . .	95
Collard Greens . . . . .	65
Corn Cob, Fresh Niblets . . . . .	29
Cucumber . . . . .	95
Cucumber, Peeled, Seeded, Diced . . . . .	55
Edamame, Hulled . . . . .	90
Eggplant, Japanese, Slices . . . . .	90
Eggplant, Peeled . . . . .	84
Fennel, With 6" Stem . . . . .	93
Fennel, Stemmed . . . . .	56
Garlic . . . . .	83
Ginger Root . . . . .	83
Horseradish Root, Peeled . . . . .	73
Jerusalem Artichoke . . . . .	69



## Vegetable Yields

Item	% Yield
Jicama . . . . .	81
Kale, Green . . . . .	60
Kohlrabi . . . . .	47
Leeks . . . . .	44
Lemon Grass, Trimmed . . . . .	68
Lettuce, Bibb/Butter . . . . .	80
Lettuce, Greenleaf . . . . .	81
Lettuce, Iceberg . . . . .	73
Lettuce, Redleaf . . . . .	75
Lettuce, Romaine . . . . .	75
Lotus Root . . . . .	80
Malanga . . . . .	74
Mushrooms, Crimini, Trimmed . . . . .	74
Mushroom Crimini, Stems, Tipped. . . . .	89
Mushrooms, Morel, . . . . .	85
Mushrooms, Oyster, Sliced . . . . .	95
Mushroom, Shiitake . . . . .	94
Mushrooms, White . . . . .	94
Mustard Greens . . . . .	75
Okra, Trimmed . . . . .	84
Onions, Green . . . . .	83
Onions, Red . . . . .	90
Onions, Yellow. . . . .	90
Parsnips . . . . .	84
Peas, Snap . . . . .	94
Peppers, Anaheim, Seeded, Diced . . . . .	87
Peppers, Bell, Green . . . . .	81
Peppers, Habanero . . . . .	88
Peppers, Jalapeño, Chopped w/ Seeds . . . . .	94
Peppers, Pasilla, Cored, Seeded . . . . .	76
Peppers, Bell, Red. . . . .	84
Peppers, Serrano, Chopped w/ Seeds . . . . .	87
Potato, Baker, Russet . . . . .	78
Pumpkin, Whole . . . . .	63
Purslane . . . . .	75
Purslane, Stemmed. . . . .	55
Radicchio . . . . .	92
Radish, Daikon . . . . .	88
Rhubarb . . . . .	92



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## Vegetable Yields

Item	% Yield
Rutabaga . . . . .	81
Shallots, Peeled, Diced . . . . .	80
Spinach . . . . .	66
Squash, Acorn. . . . .	76
Squash, Banana . . . . .	76
Squash, Butternut. . . . .	84
Squash, Chayote . . . . .	80
Squash, Crookneck. . . . .	98
Squash, Hubbard . . . . .	71
Squash, Patty Pan. . . . .	95
Squash, Spaghetti. . . . .	69
Squash, Summer . . . . .	95
Squash, Zucchini . . . . .	94
Sweet Potato . . . . .	75
Taro Root . . . . .	86
Tomatillos . . . . .	88
Tomato, Cherry . . . . .	95
Tomatoes, Cored & Peeled . . . . .	92
Tomatoes, Grape. . . . .	98
Tomatoes, Roma. . . . .	94
Turnips . . . . .	81
Wasabi Root . . . . .	73
Yam, Whole, Peeled. . . . .	88
Yucca, Peeled . . . . .	78