

## Volume (C) to Mass (g)

	1 C	1/2 C	1/3 C	1/4 C	TB	TSP
a/p flour (dip & sweep)	145	73	48	36	9.06	3.02
a/p flour (sifted)	114	57	38	29	7.13	2.37
almond paste	284	142	95	71	17.75	5.92
almonds, sliced	85	43	28	21	5.31	1.77
almonds, slivered	120	60	40	30	7.50	2.50
baking powder					14.70	4.90
baking soda					15.00	5.00
bread flour (dip & sweep)	157	79	52	39	9.81	3.27
bread flour (sifted)	121	61	40	30	7.56	2.52
brown sugar, dark	239	120	80	60	14.94	4.98
brown sugar, light	217	109	72	54	13.56	4.52
butter	227	114	76	57	14.19	4.73
cake flour (dip & sweep)	130	65	43	33	8.13	2.71
cake flour (sifted)	100	50	33	25	6.25	2.08
caraway seeds					7.00	2.33
chestnut flour	120	60	40	30	7.50	2.50
cinnamon					6.50	2.17
clarified butter	195	98	65	49	12.19	4.06
cocoa powder (dip & sweep)	95	48	32	24	5.94	1.98
cocoa powder (sifted)	75	38	25	19	4.69	1.56
cornmeal	128	64	43	32	8.00	2.67
cornstarch	120	60	40	30	7.50	2.50
cream of tartar					9.30	3.10
dry milk					10.00	3.33
egg, white				33		
egg, whole				56		
egg, yolk				21		
extracts					12.00	4.00
gelatin					9.30	3.10
glycerine					18.00	6.00
grated zest					6.00	2.00
hazelnuts, whole	152	76	51	38	9.50	3.17
heavy cream	232	116	77	58	14.50	4.83
honey	336	168	112	84	21.00	7.00
lemon juice	250	125	83	63	15.63	5.21
malt powder					9.30	3.10
milk (& all other dairy)	242	121	81	61	15.13	5.04
molasses	322	161	107	81	20.13	6.71
orange juice	242	121	81	61	15.13	5.04
pecans, chopped	114	57	38	29	7.13	2.37
pecans, halves	100	50	33	25	6.25	2.08
pistachios, whole	152	76	51	38	9.50	3.17
poppy seeds					9.00	3.00
powdered sugar	115	58	38	29	7.19	2.40
salt, table					20.10	6.70
shortening	191	96	64	48	11.94	3.98
vegetable oil	215	108	72	54	13.44	4.48
walnuts, chopped	114	57	38	29	7.13	2.37
walnuts, halves	100	50	33	25	6.25	2.08
water	236	118	79	59	14.75	4.92
wheat germ					4.50	1.50
white sugar	200	100	67	50	12.50	4.17
whole wheat flour	125	63	42	31	7.81	2.60
yeast, instant					9.60	3.20

## Pan Capacities

Round	cups	liters
6"	4	0.9
8"	7	1.7
8" springform	10	2.4
9"	9	2.1
9" springform	13	3.1
10"	11	2.6
10" springform	16	3.8
12"	16	3.8
14"	22	5.2
<b>Rectangular</b>		
8x8"	8	1.9
9x9"	11	2.6
11x7"	8	1.9
13x9"	16	3.8
15.5x10.5" jellyroll	10	2.4
17.5x11.5" jellyroll	12	2.8
<b>Loaf</b>		
5 1/2 x 3 1/8 x 2 1/4"	2.5	0.6
7 1/2 x 3 3/4 x 2 1/4"	4	0.9
8 1/2 x 4 1/2"	6	1.4
9x5x3	8	1.9
10x4x3	7.5	1.8
<b>Tubes</b>		
6 1/4 x 3 1/4"	5	1.2
8 1/4 x 3 1/4"	6	1.4
8x4"	9	2.1
10 x 3 3/4"	12	2.8
9 1/2 x 4 1/4"	17	4.0
9 3/4 x 4 1/4"	19	4.5

## Target Temperatures

<b>sugar</b> (dark caramel)	374°
<b>deep fry</b>	365°
<b>sugar</b> (medium caramel)	356°
<b>sugar</b> (light caramel)	329° (+/- 9°)
<b>sugar</b> (hard crack)	305° (+/- 5°)
<b>sugar</b> (soft crack)	280° (+/- 10°)
<b>sugar</b> (hard ball)	258° (+/- 8°)
<b>sugar</b> (firm ball)	246° (+/- 2°)
<b>sugar</b> (soft ball)	238° (+/- 4°)
<b>sugar</b> (blow)	232° (+/- 2°)
<b>sugar</b> (pearl)	221° (+/- 1°)
<b>sugar</b> (thread)	215°
<b>baked goods</b>	200°
<b>egg</b> (custard set firm)	180°
<b>beef/lamb - well</b>	170°
<b>poultry</b> (dark)	170°
<b>poultry</b> (white)	160°
<b>egg</b> (custard set soft)	160°
<b>pork</b>	155°
<b>beef/lamb - medium</b>	140°
<b>beef/lamb - rare</b>	120°
<b>chocolate</b> (temper melt)	115°
<b>chocolate</b> (temper set)	88°

## Pressure Cooker Times

Beans	
<b>black</b>	30
<b>black eye</b>	11
<b>cannellini</b>	40
<b>cranberry</b>	34
<b>garbanzo</b>	55
<b>kidney</b>	25
<b>lentils</b>	5
<b>lima</b>	25
<b>navy</b>	25
<b>northern</b>	25
<b>pigeon</b>	25
<b>pinto</b>	25
<b>white</b>	33
<ul style="list-style-type: none"> <li>• from dry</li> <li>• 4:1 water/beans</li> <li>• 1/4 TS salt / C water</li> <li>• quick release</li> </ul>	
Rice	
<b>brown</b>	13
<b>white</b>	5
<b>wild</b>	22
<ul style="list-style-type: none"> <li>• 1:1.5 rice/water</li> <li>• steam in bowl over steamer insert</li> <li>• natural release</li> </ul>	

## Grain Hydration

<b>barley</b> (firm)	3
<b>barley</b> (soft)	4
<b>bulgur</b> (soak)	2.25
<b>bulgur</b> (stovetop)	2
<b>kasha</b>	2
<b>oats</b> (rolled)	1.3
<b>oats</b> (steel cut)	4
<b>polenta</b>	4
<b>rice, arborio</b> (as risotto)	4
<b>rice, brown-long</b>	2.25
<b>rice, brown-short</b>	2
<b>rice, sushi</b>	1.1
<b>rice, white-long</b>	1.75
<b>rice, white-medium</b>	1.5
<b>rice, wild</b>	3

## Substitutions

<b>cake flour</b> (1C / 130g)	108g a/p flour + 23g cornstarch
<b>brown sugar</b>	91% white sugar, 9% molasses
<b>semisweet for unsweetened chocolate chips</b>	remove 12g sugar & 3g butter per ounce of semisweet used
<b>buttermilk</b>	1 tbsp lemon juice/vinegar per cup milk
<b>bread flour</b>	add 1 tsp gluten per C a/p flour
<b>baking powder</b> (1tsp)	1/4 tsp baking soda + 1/2 tsp cream of tartar

## Fluid Volume Conversions

	tsp	tbsp	1 C	qt	gal
tsp	1	0.3333	0.0208	0.0052	0.0013
tbsp	3	1	0.0625	0.0156	0.0039
1 C	48	16	1	0.25	0.0625
qt	192	64	4	1	4
gal	768	256	16	4	1

## Metric Conversions

1 oz = 28.3495 g

1 lb = 453.5924 g

1 fl oz = 29.5735 ml

1 cup = 236.5882 ml

1 qt = 946.3529 ml

# Doughs

## Bread

a/p flour	5
water	3

- 2% salt, 1% yeast

## Biscuit

a/p flour	3
fat	1
liquid	2

- 5% baking powder
- 3% salt
- 250g makes 6x 3" round

## Cookie

sugar	1
fat	2
a/p flour	3

- 1% salt
- 1 egg / 225g flour (opt.)
- 2 % baking powder (opt.)

## Pâte Brisée

a/p flour	3
fat	2
water	1

- 340g flour for 9" top & bottom; 225g for bottom
- 1 TB sugar/145g flour + egg & cream for milk makes Pâte Sucrée

## Pasta

a/p flour	3
egg	2

- 125g flour per serving

## Shortbread

a/p flour	3
fat	2
egg + cream	1
sugar	1

- 225g flour for 8"x8" pan
- 1% salt

## Streusel

a/p flour	1
butter	1
brown sugar	1
nuts (opt)	1

- 1.5% salt

# Batters

## Crêpe

liquid	1
egg	1
a/p flour	0.5

- 110g flour makes 6x 9"
- 1% salt

## Pancake

liquid	2
egg	1
melted butter	0.5
a/p flour	1

- 55g flour per person
- 2% salt
- 4% baking powder

## Quick Bread

a/p flour	2
liquid	2
egg	1
melted butter	1

- 225g flour per loaf
- 2% salt
- 4% baking powder

## Fritter

a/p flour	2
liquid	2
egg	1

- 110g flour for 8 large
- 1% salt
- 2% baking powder

## Pâte à Choux

water	2
butter	1
a/p flour	1
egg	2

- 110g flour makes about 24 gougères

# Cakes 1

## American Butter

<b>sugar</b>	1
<b>cake flour</b>	1
<b>butter</b>	0.6
<b>milk</b>	0.8
<b>egg</b>	0.4
• 300g flour for 2x 9" round	
• 1.5% salt	
• 6.5% baking powder	

## American Sponge

<b>egg</b>	1
<b>sugar</b>	1
<b>cake flour</b>	1
<b>clarified butter</b>	1
• 225g flour per 9" round	
• 3% salt	
• 4% baking powder	

## Angel Food

<b>egg white</b>	3
<b>sugar</b>	3
<b>cake flour</b>	1
• 110g flour for 9" tube	
• 1% salt	

# Cakes 2

## Cocoa Gènoise

<b>egg</b>	3.5
<b>sugar</b>	1.4
<b>cake flour</b>	1
<b>beurre noisette</b>	0.5
<b>cocoa</b>	0.4
<b>hot water</b>	0.8
• 70g cake flour per 9" round	

## Classic Gènoise

<b>egg</b>	2
<b>sugar</b>	1
<b>cake flour</b>	1
<b>beurre noisette</b>	0.5
• 100g flour per 9" round	
• sub 50% of cake for any other non-glutinous flour to make extra light	

## Pound

<b>butter</b>	1
<b>sugar</b>	1
<b>egg</b>	1
<b>a/p flour</b>	1
• 225g flour per loaf / quart	
• 3% salt	

# Sauces & Stock

## Béchamel

roux	1
milk	6.5

## Brine

water	20
salt	1

## Caramel

sugar	1
cream	1

## Consommé

stock	12
meat	3
mirepoix	1
egg white	1

## Ganache

chocolate	1
cream	1

## Hollandaise

clarified butter	5
egg yolk	1
lemon juice/vinegar	1

## Mayonnaise

oil	20
lemon juice/vinegar	1
• + 1 egg yolk per 5C oil	

## Sabayon

egg yolk	3
white wine	4
sugar	1.75
• 4 yolks = ~85g	
• cook to 160°	

## Stock

water	3
bone	1

## Vinaigrette

oil	3
vinegar	1

# Custards & Puddings

## Basic Egg Custard

milk/cream	2
egg	1
sugar	0.40

## Crème Anglaise

milk/cream	4
egg yolk	1
sugar	1

- cook fully for crème brûlée
- freeze for ice cream
- beat in equal mass butter for buttercream

## Crème Pâtissière

milk/cream	4
egg yolk	1
sugar	1
cornstarch	0.38
butter	0.25

- don't add butter until just warm enough to melt it

## Pudding

milk/cream	2
sugar	0.3
cornstarch	0.13
butter	0.19

- don't add butter until just warm enough to melt it
- 15g semi-chocolate + 30g cocoa powder / 2C for chocolate

# Thickeners

## Cornstarch Slurry

cornstarch	1
liquid	1

- RATIO BY VOLUME!
- 1 tbsp starch will thicken 1 C liquid

## Beurre Manié

butter	1
a/p flour	1

- RATIO BY VOLUME!

## Roux

a/p flour	3
fat	2

## Roux-as-Thickener

liquid	10
roux	1

## Fruit Pies

This chart shows grams cornstarch and sugar use **per 30g of fruit**.

For all but apples, it's a quart (500 - 600g) of prepped fruit for a 9" pie. Apples require double that volume (~900g).

	<b>corn starch</b>	<b>sugar</b>
<b>apple</b>	1	3.1
<b>apricot</b>	2	3.4
<b>blackberry</b>	4	6.25
<b>blueberry</b>	2.5	5
<b>cherry</b>	3	8.75
<b>cranberry</b>	0	20
<b>peach</b>	1	3.25
<b>pear</b>	1	2.25
<b>plum</b>	2	4.15
<b>nectarine</b>	1	3.33
<b>rhubarb</b>	2	8.25