DOC's BREWING CHEAT-SHEET

MASHOUT | SPARGING | ALPHA AMYLASE | ALPHA & BETA | DIASTATIC ACTIVITY | BETA AMYLASE | PROTEOLYTIC ACTIVITY | PROTEIN RES | "ACID" REST | ALE FERMENTATION | ALE STORAGE | UK CELLAR | ALE SERVING | LAGER SERVING | LAGER FERMENTATION | LAGERING

F	C	OUNCE	GRAM	GRAM	OUNCE	POUND	KILO	KILO	POUND	US					IMPERIAL				METRIC		POTENTIAL ALCOHOL		
212	100.0	0.10	2.84	1.00	0.04	0.10	0.05	0.05	0.11	FL OZ	CUP	PINT	QT	GAL	FL OZ	PINT	QT	GAL	ML	LITRE	SG	%ABV	%ABW
210	98.1	0.25	7.09	2.00	0.07	0.25	0.11	0.10	0.22	0.96	0.12	0.06	0.03	0.01	1.00	0.05	0.03	0.01	28.41	0.03	0.980	-2.6	-2.1
205	96.1	0.50	14.18	3.00	0.11	0.50	0.23	0.15	0.33	1.00	0.13	0.06	0.03	0.01	1.04	0.05	0.03	0.01	29.57	0.03	0.983	-2.3	-1.8
200	93.3	0.75	21.26	4.00	0.14	0.75	0.34	0.20	0.44	1.69	0.21	0.11	0.05	0.01	1.76	0.09	0.04	0.01	50.00	0.05	0.985	-1.9	-1.5
195	90.6	1.00	28.35	5.00	0.18	1.00	0.45	0.25	0.55	2.54	0.32	0.16	0.08	0.02	2.64	0.13	0.07	0.02	75.00	0.08	0.988	-1.6	-1.3
190	87.8	1.25	35.44	10.00	0.35	1.25	0.57	0.30	0.66	3.38	0.42	0.21	0.11	0.03	3.52	0.18	0.09	0.02	100.00	0.10	0.990	-1.3	-1.0
185	85.0	1.50	42.53	15.00	0.53	1.50	0.68	0.40	0.88	4.00	0.50	0.25	0.13	0.03	4.17	0.21	0.10	0.03	118.29	0.12	0.993	-1.0	-0.8
180	82.2	1.75	49.61	20.00	0.71	1.75	0.79	0.50	1.10	4.80	0.60	0.30	0.15	0.04	5.00	0.25	0.13	0.03	142.06	0.14	0.995	-0.7	-0.6
175	79.4	2.00	56.70	25.00	0.88	2.00	0.91	0.60	1.32	5.07	0.63	0.32	0.16	0.04	5.28	0.26	0.13	0.03	150.00	0.15	0.998	-0.4	-0.3
170	77.5	2.25	63.79	30.00	1.06	2.25	1.02	0.70	1.54	6.76	0.85	0.42	0.21	0.05	7.04	0.35	0.18	0.04	200.00	0.20	1.000	0.0	0.0
168	75.6	2.50	70.88	35.00	1.23	2.50	1.13	0.80	1.76	7.68	0.96	0.48	0.24	0.06	8.00	0.40	0.20	0.05	227.30	0.23	1.003	0.3	0.2
166	74.4	2.75	77.96	40.00	1.41	2.75	1.25	0.90	1.98	8.00	1.00	0.50	0.25	0.06	8.33	0.42	0.21	0.05	236.58	0.24	1.005	0.6	0.5
164	73.3	3.00	85.05	45.00	1.59	3.00	1.36	1.00	2.20	8.45	1.06	0.53	0.26	0.07	8.80	0.44	0.22	0.05	250.00	0.25	1.008	1.0	0.8
162	72.2	3.25	92.14	50.00	1.76	3.25	1.47	1.25	2.76	9.60	1.20	0.60	0.30	0.08	10.00	0.50	0.25	0.06	284.13	0.28	1.010	1.3	1.0
160	71.1	3.50	99.23	55.00	1.94	3.50	1.59	1.50	3.31	10.14	1.27	0.63	0.32	0.08	10.56	0.53	0.26	0.07	300.00	0.30	1.013	1.6	1.3
158	70.0	3.75	106.31	60.00	2.12	4.00	1.81	1.75	3.86	12.00	1.50	0.75	0.38	0.09	12.50	0.62	0.31	0.08	354.87	0.35	1.015	1.9	1.5
156	68.9	4.00	113.40	65.00	2.29	4.50	2.04	2.00	4.41	13.53	1.69	0.85	0.42	0.11	14.08	0.70	0.35	0.09	400.00	0.40	1.018	2.4	1.9
154	67.8	4.25	120.49	70.00	2.47	5.00	2.27	2.25	4.96	16.00	2.00	1.00	0.50	0.13	16.67	0.83	0.42	0.10	473.16	0.47	1.020	2.9	2.3
152	66.7	4.50	127.58	75.00	2.65	5.50	2.49	2.50	5.51	16.91	2.11	1.06	0.53	0.13	17.60	0.88	0.44	0.11	500.00	0.50	1.023	3.1	2.4
150	65.6	4.75	134.66	80.00	2.82	6.00	2.72	2.75	6.06	19.20	2.40	1.20	0.60	0.15	20.00	1.00	0.50	0.13	568.25	0.57	1.025	3.2	2.6
148	64.4	5.00	141.75	85.00	3.00	6.50	2.95	3.00	6.61	24.00	3.00	1.50	0.75	0.19	25.00	1.25	0.63	0.16	710.31	0.71	1.028	3.6	2.8
146	63.3	5.25	148.84	90.00	3.17	7.00	3.18	3.25	7.16	32.00	4.00	2.00	1.00	0.25	33.33	1.67	0.83	0.21	946.33	0.95	1.030	3.9	3.1
144	62.2	5.50	155.93	95.00	3.35	7.50	3.40	3.50	7.72	33.81	4.23	2.11	1.06	0.26	35.20	1.76	0.88	0.22	####	1.00	1.033	4.2	3.4
142	61.1	5.75	163.01	100.00	3.53	8.00	3.63	3.75	8.27	48.00	6.00	3.00	1.50	0.38	50.00	2.50	1.25	0.31	####	1.42	1.035	4.5	3.6
140	60.0	6.00	170.10	110.00	3.88	8.50	3.86	4.00	8.82	64.00	8.00	4.00	2.00	0.50	66.67	3.33	1.67	0.42	####	1.89	1.038	4.9	3.9
138	58.9	6.25	177.19	120.00	4.23	9.00	4.08	4.25	9.37	67.63	8.45	4.23	2.11	0.53	70.40	3.52	1.76	0.44	####	2.00	1.040	5.3	4.2
136	57.8	6.50	184.28	130.00	4.59	9.50	4.31	4.50	9.92	72.00	9.00	4.50	2.25	0.56	75.00	3.75	1.88	0.47	####	2.13	1.043	5.6	4.4
134	56.7	6.75	191.36	140.00	4.94	10.00	4.54	4.75	10.47	96.00	12.00	6.00	3.00	0.75	100.00	5.00	2.50	0.63	####	2.84	1.045	5.8	4.6
132	55.6	7.00	198.45	150.00	5.29	11.00	4.99	5.00	11.02	128.00	16.00	8.00	4.00	1.00	133.33	6.67	3.33	0.83	####	3.79	1.048	6.1	4.9
130	54.4	7.25	205.54	160.00	5.64	12.00	5.44	6.00	13.23	153.60	19.20	9.60	4.80	1.20	160.00	8.00	4.00	1.00	####	4.55	1.050	6.4	5.1
128	53.3	7.50	212.63	170.00	6.00	13.00	5.90	7.00	15.43	169.07	21.13	10.57	5.28	1.32	175.99	8.80	4.40	1.10	####	5.00	1.053	6.9	5.5
126	52.2	7.75	219.71	180.00	6.35	14.00	6.35	8.00	17.64	192.00	24.00	12.00	6.00	1.50	200.00	10.00	5.00	1.25	####	5.68	1.055	7.3	5.8
124	51.1	8.00	226.80	190.00	6.70	15.00	6.80	9.00	19.84	256.00	32.00	16.00	8.00	2.00	266.67	13.33	6.67	1.67	####	7.57	1.058	7.6	6.0
122	50.0	8.25	233.89	200.00	7.05	16.00	7.26	10.00	22.05	307.20	38.40	19.20	9.60	2.40	320.00	16.00	8.00	2.00	####	9.09	1.060	7.8	6.2
120	48.9	8.50	240.98	210.00	7.41	17.00	7.71	11.00	24.25	338.15	42.27	21.13	10.57	2.64	351.99	17.60	8.80	2.20	####	10.00	1.065	8.6	6.9
118	47.8	8.75	248.06	220.00	7.76	18.00	8.16	12.00	26.46	384.00	48.00	24.00	12.00	3.00	400.00	20.00	10.00	2.50	####	11.37	1.070	9.3	7.4
116	46.7	9.00	255.15	230.00	8.11	19.00	8.62	13.00	28.66	507.22	63.40	31.70	15.85	3.96	527.98	26.40	13.20	3.30	####	15.00	1.075	9.9	7.9
114	45.6	9.25	262.24	240.00	8.47	20.00	9.07	14.00	30.86	640.00	80.00	40.00	20.00	5.00	666.67	33.33	16.67	4.17	####	18.93	1.080	10.5	8.4
112	44.4	9.50	269.33	250.00	8.82	22.50	10.21	15.00	33.07	676.30	84.54	42.27	21.13	5.28	703.98	35.20	17.60	4.40	####	20.00	1.085	11.3	9.0
110	43.3	9.75	276.41	260.00	9.17	25.00	11.34	16.00	35.27	768.00	96.00	48.00	24.00	6.00	800.00	40.00	20.00	5.00	####	22.73	1.090	11.8	9.4
108	42.2	10.00	283.50	270.00	9.52	30.00	13.61	17.00	37.48	####	160.00	80.00	40.00	10.00	####	66.67	33.33	8.33	####	37.85	1.095	12.6	10.1
106	41.1	10.25	290.59	280.00	9.88	35.00	15.88	18.00	39.68	####	192.00	96.00	48.00	12.00	####	80.00	40.00	10.00	####	45.46	1.100	13.2	10.6
104	40.0	10.50	297.68	290.00	10.23	40.00	18.14	19.00	41.89	####	230.40	115.20	57.60	14.40	####	96.00	48.00	12.00	####	54.55	1.105	13.9	11.1
102	38.9	10.75	304.76	300.00	10.58	45.00	20.41	20.00	44.09	####	288.00	144.00	72.00	18.00	####	120.00	60.00	15.00	####	68.19	1.110	14.3	11.4
100	37.8	11.00	311.85	325.00	11.46	50.00	22.68	25.00	55.11	####	320.00	160.00	80.00	20.00	####	133.33	66.67	16.67	####	75.71	1.115	14.7	11.8
98	36.7	12.00	340.20	350.00	12.35	60.00	27.22	30.00	66.14	####	384.00	192.00	96.00	24.00	####	160.00	80.00	20.00	####	90.92	1.120	16.0	12.8
96	35.6	13.00	368.55	375.00	13.23	70.00	31.75	35.00	77.16	####	422.69	211.34	105.67	26.42	####	175.99	88.00	22.00	####	100.00	1.125	16.6	13.3
94	34.4	14.00	396.90	400.00	14.11	80.00	36.29	40.00	88.18	####	507.22	253.61	126.81	31.70	####	211.19	105.60	26.40	####	120.00	1.130	17.3	13.8
92	33.3	15.00	425.25	450.00	15.87	90.00	40.82	45.00	99.21	####	800.00	400.00	200.00	50.00	####	333.33	166.67	41.67	####	189.27	1.135	17.9	14.3
90	32.2	16.00	453.60	500.00	17.64	100.00	45.36	50.00	110.23	FL OZ	CUP	PINT	QT	GAL	FL OZ	PINT	QT	GAL	ML	LITRE	1.140	18.6	14.9
88	31.1	OUNCE	GRAM	GRAM	OUNCE	POUND	KILO	KILO	POUND	US					IMPERIAL				METRIC		SG	% ABV	%ABW
86	30.0																						
84	28.9	DRY WEIGHT CONVERTERS				CONVERT OUNCES AND GRAMS, OR POUNDS AND KILOGRAMS																	
82	27.8	LIQUID MEASURE CONVERTER				CONVERT ANY MEASURE INTO ANY MEASURE BY FOLLOWING THE LINE LEFT OR RIGHT.																	
80	26.7	ALCOHOL CALCULATOR				SUBTRACT FG% FIGURE FROM OG% FIGURE TO FIND ACTUAL ALC%. ALSO USE TO CONVERT BETWEEN ALC BY VOLUME (ABV) & ALC BY WEIGHT (ABW).																	
78	25.6	CARBONATION CALCULATOR				GIVES REQUIRED KEG PRESSURE FOR DESIRED CO2 VOLUMES RELATIVE TO YOUR KEG TEMPERATURE.																	
76	24.4																						
74	23.3	This sheet originally built by Farty, headbrewer@bigfoot.com. Please email me with errors, improvements and comments. Feel free to share but please leave this line intact. Happy brewing!																					
72	22.2																						
70	21.1	< DRAUGHT ALE				BOTTLED ALE				GERMAN LAGER					PILSENER & COMMERCIAL LAGER						WEISSE BIER >		
69	20.6	2.0		2.1		2.2		2.3		2.4		2.5			2.6		2.7		2.8		2.9		3.0
68	20.0	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA
67	19.4	19.3	133.1	20.9	143.8	22.4	154.4	24.0	165.1	25.6	176.2	27.1	186.5	28.6	197.2	30.2	208.2	31.8	218.9	33.3	229.3	34.8	239.9
66	18.9	18.8	129.6	20.3	140.0	21.9	151.0	23.4	161.3	25.0	172.4	26.5	182.7	28.0	193.1	29.6	204.1	31.1	214.4	32.6	224.8	34.1	235.1
65	18.3	18.3	126.2	19.8	136.5	21.4	147.2	22.9	157.5	24.4	168.2	25.9	178.6	27.4	188.9	29.0	199.6	30.5	209.9	32.0	220.3	33.5	230.6
64	17.8	17.8	122.7	19.3	133.1	20.8	143.4	22.3	153.8	23.8	164.1	25.3	174.4	26.8	184.8	28.3	195.1	29.8	205.5	31.3	215.8	32.8	226.1
63	17.2	17.4	119.6	18.8	129.6	20.3	140.0	21.8	150.3	23.3	160.3	24.8	170.6	26.3	181.0	27.7	191.0	29.2	201.3	30.7	211.3	32.2	221.7
62	16.7	16.9	116.5	18.3	126.2	19.8	136.5	21.3	146.9	22.7	156.5	24.2	166.9	25.7	177.2	27.1	186.8	28.6	197.2	30.0	206.8	31.5	217.2
61	16.1	16.4	113.1	17.8	122.7	19.3	133.1	20.8	143.1	22.2	152.7	23.7	163.1	25.1	173.1	26.5	182.7	28.0	193.1	29.4	202.7	30.9	212.7
60	15.6	15.9	109.6	17.3	119.3	18.8	129.6	20.2	139.3	21.6	148.9	23.1	159.3	24.5	168.9	25.9	178.6	27.4	188.9	28.8	198.6	30.2	208.2
59	15.0	15.5	106.5	16.9	116.2	18.3	126.2	19.7	135.8	21.1	145.5	22.5	155.1	23.9	164.8	25.3	174.4	26.8	184.4	28.2	194.1	29.6	203.7
58	14.4	15.0	103.4	16.4	113.1	17.8	122.7	19.2	132.4	20.6	142.0	21.9	151.0	23.3	160.6	24.7	170.3	26.1	180.0	27.5	189.6	28.9	199.3
57	13.9	14.5	100.0	15.9	109.6	17.3	118.9	18.7	128.6	20.1	138.2	21.4	147.2	22.8	156.9	24.2	166.5	25.5	175.8	26.9	185.5	28.3	194.8
56	13.3	14.0	96.5	15.4	106.2	16.7	115.1	18.1	124.8	19.5	134.4	20.8	143.4	22.2	153.1	23.6	162.7	24.9	171.7	26.3	181.3	27.6	190.3
55	12.8	13.6	93.4	14.9	102.7	16.2	111.7	17.6	121.3	19.0	130.7	20.3	139.6	21.7	149.3	23.0	158.6	24.3	167.5	25.7	176.9	27.0	185.8
54	12.2	13.1	90.3	14.4	99.3	15.7	108.2	17.1	117.9	18.4	126.9	19.7	135.8	21.1	145.5	22.4	154.4	23.7	163.4	25.0	172.4	26.3	181.3
53	11.7	12.7	87.2	14.0	96.2	15.3	105.1	16.6	114.5	17.9	123.1	19.2	132.0	20.5	141.3	21.8	150.3	23.1	159.3	24.4	168.2	25.7	177.2
52	11.1	12.2	84.1	13.5	93.1	14.8	102.0	16.1	111.0	17.3	119.3	18.6	128.2	19.9	137.2	21.2	146.2	22.5	155.1	23.8	164.1	25.1	173.1
51	10.6	11.8	81.0	13.0	89.6	14.3	98.6	15.6	107.2	16.8	115.8	18.1	124.8	19.4	133.4	20.7	142.4	21.9	151.0	23.2	160.0	24.5	168.6
50	10.0	11.3	77.9	12.5	86.2	13.8	95.1	15.0	103.4	16.3	112.4	17.6	121.3	18.8	129.6	20.1	138.6	21.3	146.9	22.6	155.8	23.8	164.1
49	9.4	10.9	74.8	12.1	83.1	13.3	91.7	14.5	100.0	15.8	108.9	17.1	117.6	18.3	125.8	19.5	134.4	20.7	142.7	22.0	151.7	23.2	160.0
48	8.9	10.4	71.7	11.6	80.0	12.8	88.3	14.0	96.5	15.3	105.5	16.5	113.8	17.7	122.0	18.9	130.3	20.1	138.6	21.4	147.5	22.6	155.8
47	8.3	10.0	68.6	11.2	76.9	12.3	84.8	13.5	93.1	14.8	101.7	16.0	110.0	17.2	118.2	18.4	126.5	19.6	134.8	20.8	143.4	22.0	151.3
46	7.8	9.5	65.5	10.7	73.8	11.8	81.4	13.0	89.6	14.2	97.9	15.4	106.2	16.6	114.5	17.8	122.7	19.0	131.0	20.2	139.3	21.3	146.9
45	7.2	9.1	62.4	10.2	70.3	11.4	78.3	12.6	86.5	13.7	94.5	14.9	102.7	16.1	110.7	17.3	118.9	18.4	126.9	19.6	135.1	20.7	142.7
44	6.7	8.6	59.3	9.7	66.9	10.9	75.2	12.1	83.4	13.2	91.0	14.4	99.3	15.5	106.9	16.7	115.1	17.8	122.7	19.0	131.0	20.1	138.6
43	6.1	8.2	56.2	9.3	63.8	10.5	72.1	11.6	80.0	12.7	87.6	13.9	95.5	15.0	103.1	16.1	111.0	17.3	118.9	18.4	126.9	19.5	134.4
42	5.6	7.7	53.1	8.8	60.7	10.0	68.9	11.1	76.5	12.2	84.1	13.3	91.7	14.4	99.3	15.5	106.9	16.7	115.1	17.8	122.7	18.9	130.3
41	5.0	7.3	50.0	8.4	57.6	9.5	65.5	10.6	73.1	11.7	80.7	12.8	88.3	13.9	95.8	15.0	103.1	16.1	111.0	17.2	118.6	18.3	126.2
40	4.4	6.8	46.9	7.9	54.5	9.0	62.1	10.1	69.6	11.2	77.2	12.3	84.8	13.4	92.4	14.4	99.3	15.5	106.9	16.6	114.5	17.7	122.0
39	3.9	6.4	44.1	7.5	51.4	8.6	59.0	9.6	66.2	10.7	73.8	11.8	81.0	12.9	88.6	13.9	95.5	15.0	103.1	16.0	110.3	17.1	117.9
38	3.3	6.0	41.4	7.0	48.3	8.1	55.8	9.1	62.7	10.2	70.3	11.2	77.2	12.3	84.8	13.3	91.7	14.4	99.3	15.4	106.2	16.5	113.8
37	2.8	5.6	38.3	6.6	45.5	7.7	52.7	8.7	59.6	9.7	66.9	10.7	73.8	11.8	81.0	12.8	88.3	13.9	95.5	14.9	102.4	15.9	109.6
36	2.2	5.1	35.2	6.2	42.7	7.2	49.6	8.2	56.5	9.2	63.4	10.2	70.3	11.2	77.2	12.3	84.8	13.3	91.7	14.3	98.6	15.3	105.5
35	1.7	4.7	32.4	5.8	39.6	6.8	46.5	7.8	53.4	8.7	60.0	9.7	66.9	10.7	73.8	11.8	81.0	12.7	87.6	13.7	94.5	14.7	101.4
34	1.1	4.3	29.6	5.3	36.5	6.3	43.4	7.3	50.3	8.2	56.5	9.2	63.4	10.2	70.3	11.2	77.2	12.1	83.4	13.1	90.3	14.1	97.2
33	0.6	3.9	26.9	4.9	33.4	5.9	40.3	6.8	46.9	7.8	53.4	8.7	60.0	9.7	66.9	10.7	73.4	11.6	79.6	12.6	86.5	13.5	93.1
32	0.0	3.5	24.1	4.4	30.3	5.4	37.2	6.3	43.4	7.3	50.3	8.2	56.5	9.2	63.4	10.1	69.6	11.0	75.8	12.0	82.7	12.9	88.9
F	C	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA
CO2 VOLUMES:		2.0		2.1		2.2		2.3		2.4		2.5		2.6		2.7		2.8		2.9		3.0	
BEER STYLE:		< DRAUGHT ALE				BOTTLED ALE				GERMAN LAGER					PILSENER & COMMERCIAL LAGER						WEISSE BIER >		