Bru'n Water

Dan Joergensen

Beer Name: Bryg 51 US Pale Ale

Enter data into Light Blue cells

Water Profile Adjustment Calculator

Hover cursor over cells w/ red corner mark to display helpful comments

Desired Water Profile	Calcium (ppm)	Magnesium (ppm)	Sodium (ppm)	Sulfate (ppm)	Chloride (ppm)	Bicarbonate (ppm)	Cations (meq/L)	Anions (meq/L)	Total Hardness	Alkalinity (ppm)	RA (ppm)	SO_4/Cl Ratio	Approximate Color Descriptors for Water Profiles
Pale Ale Profile	140,0	18,0	25,0	300,0	55,0	110,0	9,6	9,6	424	91	-20	5,5	Yellow: under 6 SRM
Existing Water Profile	51,0	4,0	37,0	34,0	23,0	183,0	4,5	4,4	144	151	113	1,5	Amber: 7 to 17 SRM
Dilution Water Profile													Brown: 18 to 30 SRM
RO Water	1,0	0,0	8,0	1,0	4,0	16,0	0,4	0,4	3	13	13		Black: over 31 SRM
Dilution Percentage 50	500,0	mL/L	50,0	L/HL	< These conversions are provided for your convenience								
Diluted Water Profile	26,0	2,0	22,5	17,5	13,5	99,5	2,4	2,4	73	82	63	1,3	
Target Water Adjustment (ppm)	**114,0**	**16,0**	**2,5**	**282,5**	**41,5**	**10,5**	7,1	7,2	351				
Actual Water Adjustment (ppm)	**117,5**	**14,8**	**0,0**	**281,7**	**43,4**	**-56,2**	7,1	6,2	355				
Finished Water Profile	143,5	16,8	22,5	299,2	56,9	43,3	9,5	8,5	428	36	-77	5,3	

Estimated Mash pH 5,4 — This pH value is NOT VALID until the grain and water information are properly entered for the beer on the **Mash Acidification** sheet.

Water Additions	Addition (gram/L)	Calcium (ppm)	Magnesium (ppm)	Sodium (ppm)	Sulfate (ppm)	Chloride (ppm)	Bicarbonate (ppm)	Total Water Additions: Mash — Total Mineral Additions (grams)	Total Water Additions: Sparge — Total Mineral Additions (grams)
								Water Volume (L) 50,00	Water Volume (L) 0,00
Gypsum ($CaSO_4$)	**0,40**	93,0			223,3			**20,0**	**0,0**
Epsom Salt ($MgSO_4$)	**0,15**		14,8		58,5			**7,5**	**0,0**
Canning Salt (NaCl)	**0,00**			0,0		0,0		**0,0**	**0,0**
Baking Soda ($NaHCO_3$)	**0,00**			0,0			0,0	**0,0**	Not Recommended
Calcium Chloride ($CaCl_2$)	**0,09**	24,5				43,4		**4,5**	**0,0**
Chalk ($CaCO_3$)	**0,00**	0,0					0,0	**0,0**	Not Recommended
Pickling Lime ($Ca(OH)_2$)	**0,00**	0,0					0,0	**0,0**	Not Recommended
Magnesium Chloride ($MgCl_2$)	**0,00**		0,0			0,0		**0,0**	**0,0**
Acid	**Addition (mL/L)**	Acid Strength parameters are entered on the **Sparge Acidification** sheet.			Sulfate (ppm)	Chloride (ppm)	Bicarbonate (ppm)	Total Acid Addition (ml)	Total Acid Addition (ml)
Lactic	**0,08**	Strength	88,0	%	0,0	0,0	-56,2	**4,0**	**0,0**

Total Batch Volume — Water Volume (L) 36,00

Add $CaSO_4$ & $CaCl_2$ to replace Chalk & Lime in Sparge Water? ☐

Add Hardness Minerals directly to Kettle? ☐

Most mineral additions should be added to both the mash water and sparge water. DO NOT add alkalinity producing minerals such as chalk, baking soda, or pickling lime to sparge water since that counteracts the desired sparge water acidification. Either reserve those minerals from the sparge water and add directly to the kettle, or delete them and substitute other calcium or sodium containing minerals to make up for their contributions. Do not use the acid amount calculated for Mash Adjustment from this sheet for the Sparge Water adjustment. Use the acid amount calculated on the Sparge Acidification sheet for Sparge Water. **Add acids prior to heating the water.**

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