

Bru'n Water

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Water Profile Adjustment Calculator

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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
Yellow Balanced ▼	50.0	7.0	5.0	75.0	60.0	0.0	3.3	3.3	154	0	-40	1.3
Existing Water Profile	4.0	0.9	30.0	9.0	19.0	54.1	1.6	1.6	14	45	41	0.5
Dilution Water Profile												
Distilled Water ▼	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	
Dilution Percentage	100	128.0	oz/gal	8.0	pt/gal	< These conversions are provided for your convenience						
Diluted Water Profile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.0
Target Water Adjustment (ppm)	50.0	7.0	5.0	75.0	60.0	0.0	3.3	3.3	154			
Actual Water Adjustment (ppm)	210.1	0.0	0.0	504.3	0.0	-16.7	10.5	10.2	525			
Finished Water Profile	210.1	0.0	0.0	504.3	0.0	-16.7	10.5	10.2	525	-14	-164	0.0

Total Water Additions

								Mash		Sparge	
								Water Volume (gal)	3.5	Water Volume (gal)	0.0
Mineral	Addition (gram/gal)	Calcium (ppm)	Magnesium (ppm)	Sodium (ppm)	Sulfate (ppm)	Chloride (ppm)	Bicarbonate (ppm)	Total Mineral Additions (grams)		Total Mineral Additions (grams)	
Gypsum (CaSO ₄)	3.42	210.1			504.3			12.0		0.0	
Epsom Salt (MgSO ₄)	0.00		0.0		0.0			0.0		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)	0.00	0.0				0.0		0.0		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/gal)				Sulfate (ppm)	Chloride (ppm)	Bicarbonate (ppm)	Total Acid Addition (mL)		Total Acid Addition (mL)	
Lactic ▼	0.09	Strength	88.0	%	0.0	0.0	-16.7	0.3		See Sparge Sheet	

Add CaSO₄ & CaCl to repl:
Lime in Sparge Water?



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 acid prior to heating the water.**

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Mash Acidification Calculator

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Grain Acidity			Mash Water Volume (gallons)	3.50	Batch Wort Volume (gallons)	5.00		
Grains	Grain Type		Quantity (lb)	Quantity (oz)	Color (L)	Malt Color Units (MCU)	Acidity Contribution (mEq/L)	
2 Row Pale	Base Malt	▼	8.0	1.0	2	3.2	0.3	
Biscuit	Crystal Malt	▼	1.0	1.0	23	4.9	0.6	
Munich	Base Malt	▼		14.0	9	1.6	0.2	
Special B	Crystal Malt	▼		3.0	180	6.8	0.6	
Crystal 40	Crystal Malt	▼		2.0	40	1.0	0.1	
Crystal 20	Crystal Malt	▼		6.0	20	1.5	0.2	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
	Base Malt	▼				0.0	0.0	
Total Grist Weight (lbs)			10.69	Total MCU			18.9	
Water to Grist Ratio (Qts/Lb)			1.31	Est. Beer Color (SRM)			11.2	
Mash Acidity Results								
Water used for Mash	Adjusted Water	▼	Net Water Alkalinity (mEq/L)				-3.3	
			Total Mash Acidity (mEq/L)				2.0	
EBC Color Conversion Tool	20		EBC -----> (L)	8.0	Net Mash Acidity (mEq/L)		5.2	
Estimated Room-Temperature Mash pH							4.9	

More Mash Water Alkalinity is Needed