**My Cheapo Brewsheet**

While simple yet very powerful brewing programs exist, they lack a universal platform. Programs must be installed on whatever computer you are using, programs are incompatible with each other, and online calculators require an internet connection. I want something I can take anywhere and access on any computer, either online or offline. I also want a file format where I could copy the recipe info and easily paste into a variety of formats. That is why I chose to go with an Excel workbook. If I want to work on a recipe on my lunch break, I don’t need to hack my work computer to download and install a program. If I’m brewing outside without internet access and need to change a recipe on the fly, I can do that. I can view and modify my recipes on any laptop, smartphone, or tablet. At my homebrew club meeting, I can access my files via Dropbox or a cloud server and get any recipe info I need.

Many brewing spreadsheets exist, but I found most of them either too simple or too complex. They either didn’t have all the information to formulate a recipe or the spreadsheet was so busy I got lost in it. Therefore, I decided to make my own brewing spreadsheet. I wanted a recipe formulator that was simple, easy to read.

However, there are some disadvantages to simplified Excel worksheet. The program does not allow the streamlined feel that most brewing programs have. I could circumvent some of this by using macros, but macro-enabled spreadsheets make some people (rightfully) uncomfortable. Therefore, I am left with a multi-tabbed workbook to handle most recipe formulation needs. Despite these drawbacks, this workbook fits my brewing needs.

Please note that the workbook has been designed around my brewing setup (cooler mash tun, batch sparging, yeast starter from glycerol stock w/ stir plate). I have validated all the parameters, and they work well in my system. Your mileage may vary. I hope you find it handy; if not, delete it – it’s free.

Jared Spidel

Shanty Brewery

[www.shantybrewery.com](http://www.shantybrewery.com/)

**Formulae**

The formulae for ABV, ABW, and calories are common formulae found on the internet.

The water temperature calculations are from John Palmer's How to Brew.

The yeast pitching rate is 750,000 (ale), 1,000,000 (hybrid) or 1,500,000 (lager) cells per milliliter per degree Plato.

Conversion of Brix to OG and FG in the Brew Day Worksheet are from Sean Terrill ([seanterrill.com](http://seanterrill.com)).

The remaining formulae are either common equations found on the internet or are logical.

The data for the malts, extracts, and sugars are from the manufacturer’s websites.

The data for the hops are from [homebrewtalk.com](http://www.homebrewtalk.com/wiki), [wikipedia.org](http://www.wikipedia.org), and various hops suppliers on the internet.

**Using the Sheets**

Note:

You can edit any cell, add row/columns, reformat, etc., but you first need to unprotect each worksheet under the Review menu tab.

**Recipe**

- Choose your units in either US or metric.

- Fill in the darker cells with the appropriate data. The final data of interest are calculated in the lighter cells.

- The Gravity and SRM cells are protected from accidental deletion. To update these values, see the Updating Grains/Extracts/Yeast/Styles section below.

- The amount of hops can be added in ounces or grams, just click on the heading to choose the units.

- For hop boil times, fill in the time in minutes or use the drop-down menu for mash hops, first wort hops (FWH), or dry hops.

- In the Water Volume & Temp section, the water volume of Mash Temp 2 and 3 is based on the temperature of the water in the °F column. The value is defaulted at boiling.

- Grain absorption value is defaulted at 0.100 gal/lb grain, which is what I see with my system. Adjust accordingly.

- The Target Pre-boil Vol is calculated based on the post-boil wort volume, boil time, and evaporation rate. The calculation does not take into account the thermal expansion of water. However, at boiling the expansion of water is only about 1 cup per 5 gallons.

- The Sparge Vol is defaulted to be ½ of the Target Pre-boil Vol. The value can be changed based on your 1st runnings volume to hit your Target Pre-boil Vol, i.e. if you have a large amount of grain, the 1st runnings may be greater than ½ of the Targeted Pre-boil Vol, in which case you can use a decreased Sparge Volume, if you wish.

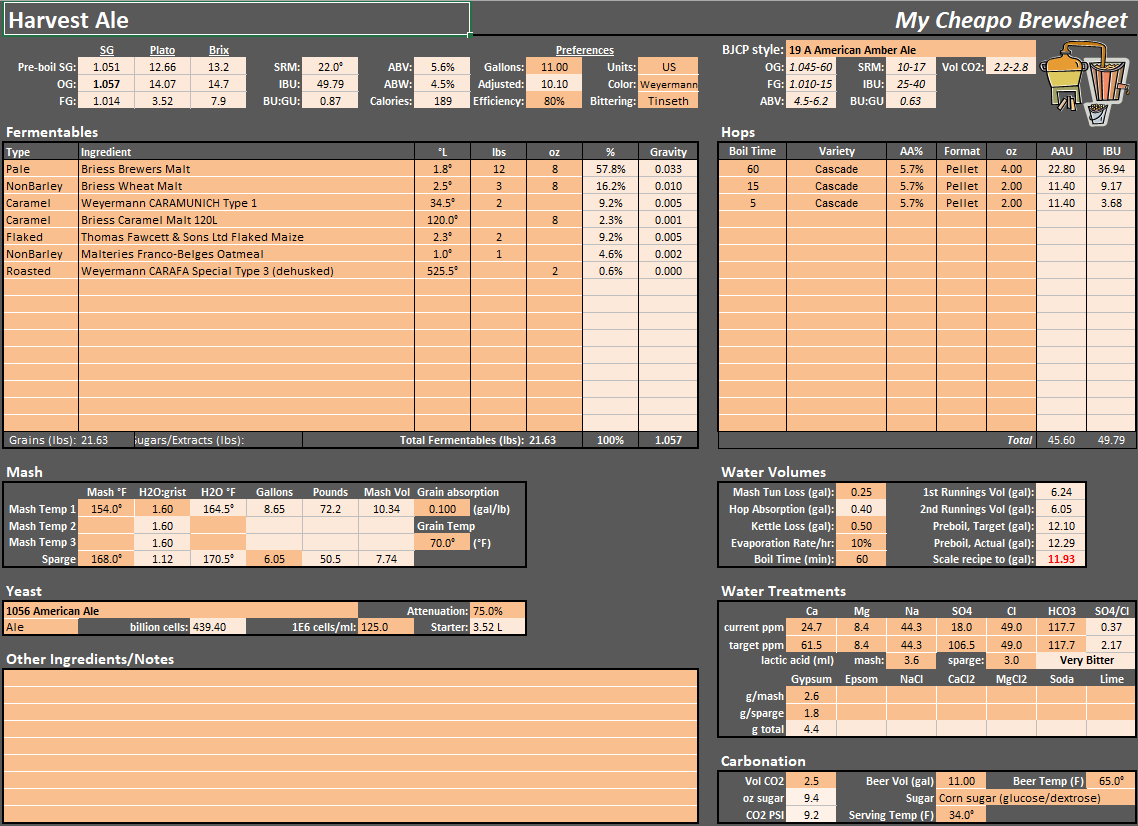
- The units for the water:grist ratio is quarts per pound for US units, and liters per kilograms for metric units.

- Scale recipe to takes into account wort adsorption from the hops and gives a suggested volume to scale to in order to achieve your desired final volume.

- The default yeast cell density is 125 million cells/ml. This is the average amount of cells I have seen when I make a starter on a stir plate from my glycerol stocks. Go to mrmalty.com for a pitching rate calculator if you are using smack-packs or vials.

- All units for calculating priming sugar or vol of CO2 are able to be changed in their own dropdown menus.

- I did not include a water calculator, as there are several great ones available on the internet. I did, however, include cells to record your water data and mineral additions. Click on “lime” to change to chalk if you use chalk.

**Brew Day Datasheet**

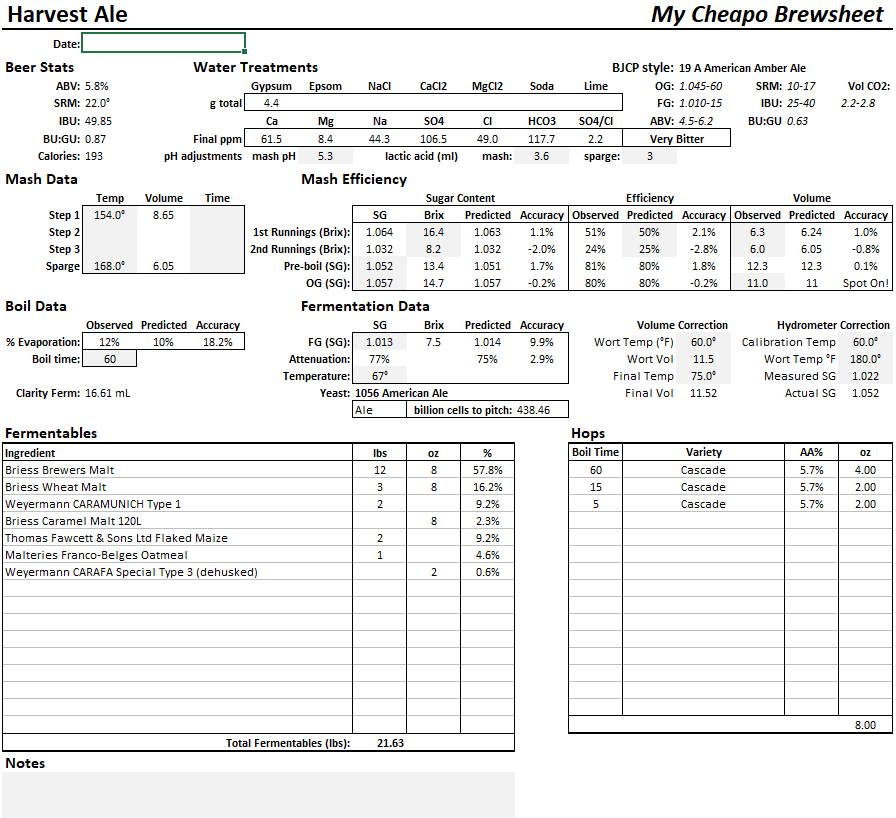
- I added this worksheet to take notes throughout the brew day and to provide a simple printout.

- Fill in the gray cells with data from your brew day.

- SRM and IBUs are calculated based off observed data for the wort volume and original gravity.

- Since using a hydrometer is not practical with hot wort, I use a refractometer and record the first/second runnings and the pre-boil SG data in Brix.

- *Important:* You are given the option to report your original and final gravities in SG from a hydrometer or Brix from a refractometer. Once you add your observed value in the cell, you cannot change your reading method, i.e., the formula in the SG or Brix cell is overwritten. If you need to reapply that formula you will need to copy it from an unedited worksheet. I know it's a pain, but that's one of the limitations of Excel without macros.



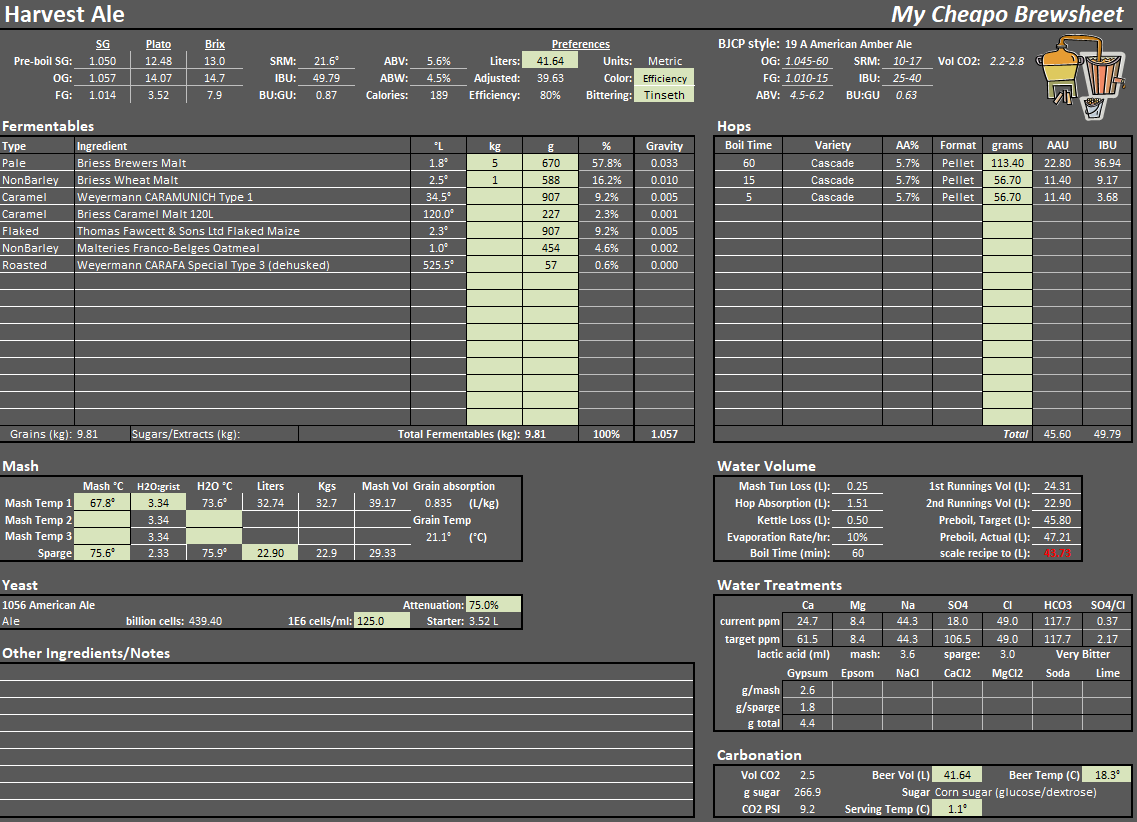
**Pull-down menu gives choice between recording in Brix or specific gravity**

**For bulk-packaged Clarity Ferm, not the 10-ml homebrew package**

**Convert Units**

- All values are copied from the Recipe worksheet, then converted to the opposite units.

- The converted values are available to be copied, then pasted into the Recipe worksheet.



**Scale-up**

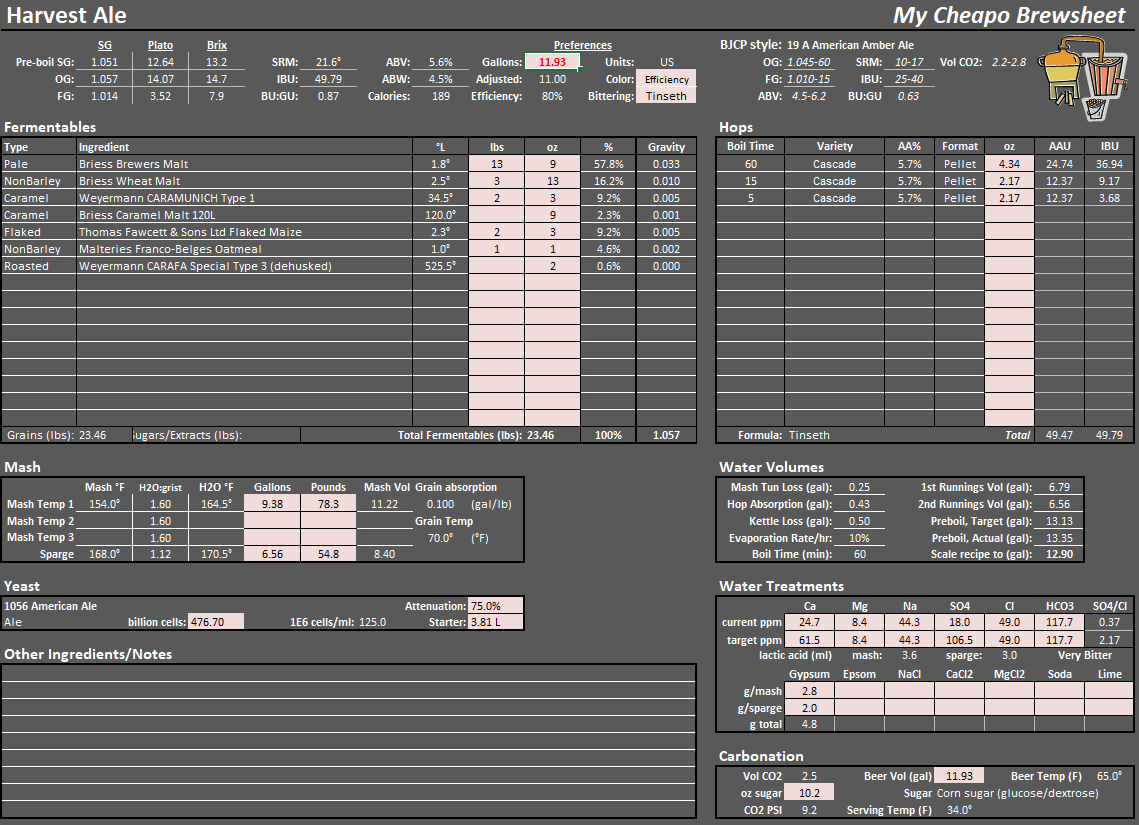
- All values are copied from the Recipe worksheet.

- You can use this to scale your recipe from the suggested “Scale recipe to:” value in the first sheet

- Enter the new volume of wort, and the new values for the amount of malts/extracts/sugars/hops are calculated.

- The amount of yeast required for fermentation of the new volume is also calculated.

- All recalculated weights and volumes are available to be copied and repasted into the Recipe worksheet.



**Updating Grains/Extracts/Yeast/Styles**

- To update the Grains and Extracts tabs, unhide the tabs

- To add a new malt or extract, insert a new row and add the required data.

- Add/edit the data in the Grains or Extract tabs, then add/edit the Fermentables tab. Descending sort column B and “expand the selection” to include columns C and D

- You will also need to redefine the name tags under Formulas>Name Manager

- Updating the yeast and BJCP styles requires some more work, which I’m not going into detail here. Unless you figure it out for yourself, don't mess with these.