

Recipe Formulation

DIY Brewing Company



Overview

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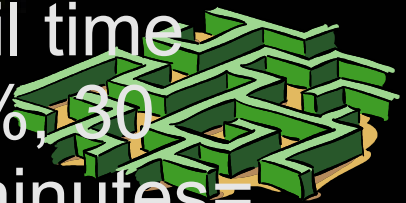
Recipe Formulation Overview

- ➔ Start off by reading other recipes
- ➔ Go to BJCP Guidelines and see what is historically in the style
- ➔ Find where other's are going
- ➔ Take notes on grain tastes by eating them
- ➔ Read manufacturers websites
- ➔ Use small amounts of ingredients you have never used before
- ➔ Submit recipes to other's to get feedback

Calculations

➔ IBU Calculation

- $IBU = \text{Hops} \times AA\% \times \text{utilization volume} \times 1.34X$
efficiency
- ǒ Hops = the weight of hops in ounces
- ǒ AA% = alpha acid percent
- ǒ Utilization = the utilization percent
- ǒ Volume = the volume of the final batch in gallons
- ǒ 1.34 = a constant to convert measurement into US standards
- Efficiency= efficiency for amount of boil time
some standards are 60 minutes = 33%, 30
minutes = 22%, 10 minutes = 10% 5 minutes =
5%



Calculations

➔ Grain Calculations

- Formula for grain

- $SG = (W * PE * EE) / V$

- Example 2 lbs of grain in 5 lbs of water efficiency 80%

- $(2 \times 33 \times 0.80) / 5 = 10.56$ GP

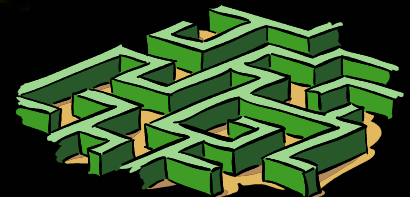
- GP= Gravity Points

- So SG would 1.01056 for this

- Calculate % of malt bill

- $(Sg \text{ of particular grain} / SG \text{ of total grain bill}) 100$

- $(1.01056 / 1.056) 100 = 19\%$



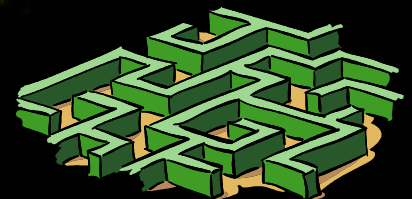
Default Values

- ➔ Crystal GP 33.9
- ➔ 2 Row GP 33
- ➔ Malt Extract 35
- ➔ Dry Malt Extract 44



Calculating Efficiency

- ➔ Actual SG / (Theoretical SG/EE)
 - Theoretical 1.056 actual 1.048 then $48 / (56 / 0.80) = 69\%$



Recommended Reading

- ➔ Designing Great Beers by Ray Daniels
- ➔ Lagering Beers by Greg Noonan
- ➔ How To Brew by John Palmer
- ➔ Classic Beer Style Jamil Zainasheff and John Palmer
- ➔ Any recipe book
- ➔ The Jamil show on the brewing network