Miami Area Society of Homebrewers Meeting

August 23, 2018

2018 MASH Medal Update

- First Coast Cup: Chris Lopez (gold, Munich Helles), Michael Moussa (bronze, Sweet Stout), Bob and Rachel Billany (silver, Best Bitter), Dave Kirsten (bronze, American Pale Ale; silver, Tropical Sout)
- MASH now has 36 medals for the year.

Present standings

1	David Kirsten	**57**
2	Geoffrey Shideler	**52**
3	Bob & Rachel Billany	**24**

GOLD	10	SILVER	12	BRONZE	14

Commander Saaz Judging and Awards

September 14th

830am- Judging prep
9am start 1st session
12pm lunch
1pm-5pm second judging session
6pm Commanders call beer fest and keg comp
- $20 for tickets including : wings/sliders veggie tray cheese tray and unlimited beer samples

September 15th

830am judging prep
9am start 1st session
12pm break for lunch
1pm-4pm BOS Judging (and any mini BOS left)
From 1-4pm judges will have an opportunity to go to Florida beer Co. For a social while BOS judging takes place.
6pm splashdown awards ceremony- ticketed meal required for those present. $35 ea includes meal selection and unlimited beer. Plus a huge raffle!

Oktoberfest with Palm Beach Draughtsmen

September 29th: 1:00 – 6:30

Only $25 per person for food and beer!

Typically 1 h 10 min - 1 h 40 min from MIA

Carpool!

MASH Polo Shirts

We are going to order polo shirts for MASH. If you would like one, please let us know.

Grovetoberfest – Saturday, October 13, 2018

Mark your calendars!

If you bring beer, you are prioritized to have free entry. If space is left, first come first serve.

Treasurer's Report

Account Balances 8/23/18

ASSETS	
Cash and Bank Accounts	
Checking	1,805
PayPal Account	3,057
Cash Account	362
TOTAL ASSETS	5,224
LIABILITIES	0.00
OVERALL TOTAL	5,224

$168

Cash Flow YTD

TOTAL INFLOWS	4,577
TOTAL OUTFLOWS	4,330
OVERALL TOTAL	247

Paid Members: 47

2018 Expense Detail

Category	Amount
Coconut Cup	$ 1,924.51
Reimbursement of Competition Entry Fees	$ 463.00
Medal Incentive	$ 380.00
Mid-year soltice party	$ 504.67
Supplies	$ 816.87
Pay Pal Fees	$ 179.94
FL State Tax	$ 61.25
TOTAL	$ 4,330.24


Step By Step

AN INTRODUCTION TO ADVANCED MASHING TECHNIQUES

(not the early 90s Brady Bunch reboot)

Miami Area Society Of HOMEBREWERS

WHAT IS MASHING?

a) The process of joining Miami’s awesome homebrew club

b) Binge watching a hilarious comedy series from the 70s and early 80s about military doctors

c) An enzymatic process

d) All of the above

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WHAT HAPPENS DURING THE MASH?

- We heat our brewing water to the desired temperature
- We “dough in” by adding our grist
- This activates enzymes, which
  - Convert starches to fermentable sugars
  - Reduce proteins into amino acids and peptides
- I usually crack my first beer

MASH TYPES

Single Infusion

Simplest of all

One rest at one temp, plus mash out (optional)

Multi-Step

More involved traditional technique

You hold the mash at two or more rests

Different rests result in producing various enzymes

Decoction

More involved traditional technique

You pull one or more decoctions, boil and return to the mash

Results in melanoidin production

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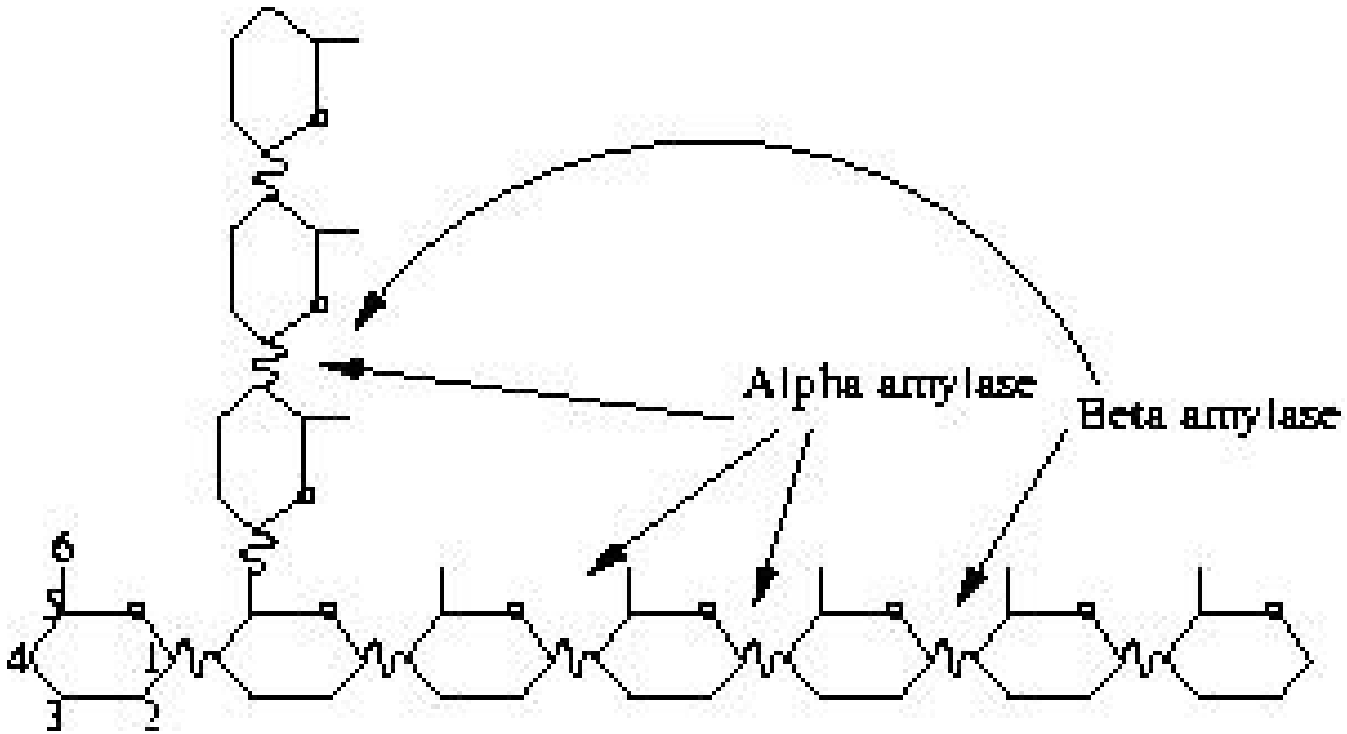
ENZYMATIC RESTS

The key players and how they get down

Enzyme	Operation Temps ºF	pH	Denatures At ºF	Function
Phytase	86-126	5.0-5.5		**Acid Rest** — Lower pH (the ”norm” is between 95-113ºF)
Beta-glucanase	95–105	<5.4	122	Break down gums (Beta-glucans)
Proteolytic enzymes *(proteinase and peptidase)*	113–140	4.6–5.0	158	**Protein Rest** — Typically capped at 138, produces Free Amino Nitrogen (FAN); breaks up large, haze-forming proteins without hurting head retention in the 131º-137º range
Beta-amylase ✯	140–149	5.4–5.6	167	**Beta-amylase Rest** — Produces maltose by snipping final two sugars in the starch chain
Alpha-amylase ✯	158–167	5.6–5.8	176	**Saccharification Rest** — Produces maltose, maltotriose, sucrose, glucose, fructose and unfermentable dextrins by snipping at the starch chain randomly

ALPHA V. BETA



HOW IS A STEP MASH DONE?

Infusion

Add heated water to raise the temperature

Direct Heat

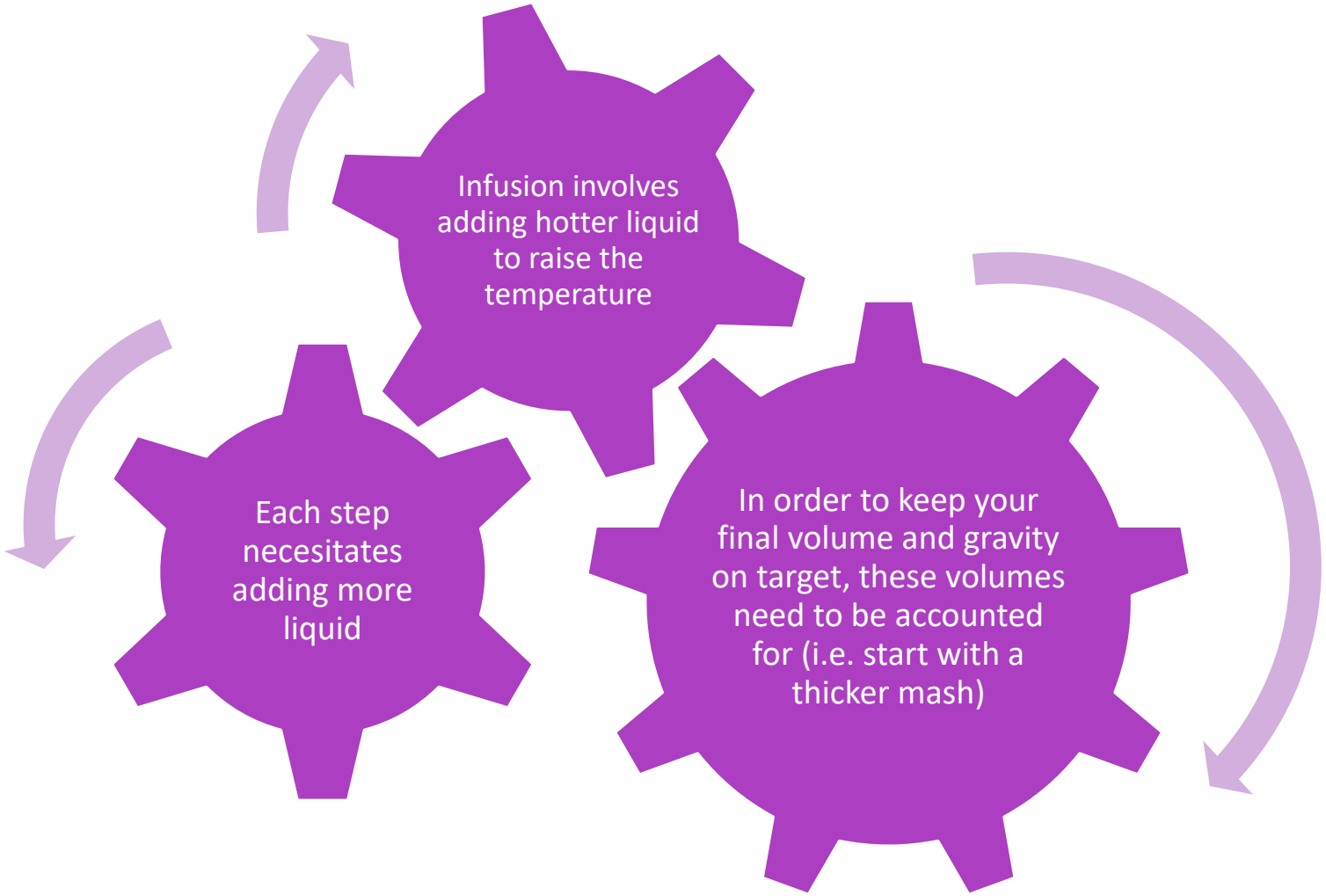
Direct fire mash tuns,

BIAB and eBIAB setups

Recirculation Systems

RIMS, HERMS, etc.

INFUSION CONSIDERATIONS



INFUSION TOOLS

There are a few ways to calculate the volumes and temperatures of your infusion additions.

Do the Math

Initial Infusion Equation:

Strike Water Temperature Tw =
(.2/r)(T2 - T1) + T2

Mash Infusion Equation:

Wa = (T2 - T1)(.2G + Wm)/(Tw - T2)

where:
r = The ratio of water to grain in quarts per pound.
Wa = The amount of boiling water added (in quarts).
Wm = The total amount of water in the mash (in quarts).
T1 = The initial temperature (¡F) of the mash.
T2 = The target temperature (¡F) of the mash.
Tw = The actual temperature (¡F) of the infusion water.
G = The amount of grain in the mash (in pounds).

Visit HowToBrew for deets

Use an Online Calculator

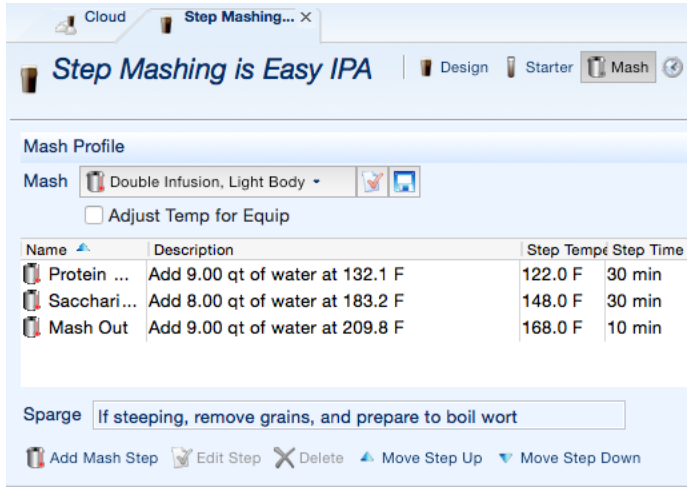
Brewers Friend (Quick)

Brewers Friend (Full)

Homebrew Supply

Brewtoad

Use BeerSmith



SOOO…WHY BOTHER?

(AND WHEN)

- Multi-step mashing can give you greater control of your wort
- For example, you can produce a more highly fermentable wort, resulting in a drier beer. Or remove haze forming proteins, resulting in a clearer beer.
- It’s useful if you plan on using undermodified malts, such as Floor-Malted Bohemian Pilsner
- Useful when using a high percentage of malts with low diastatic power (i.e. Munich of Vienna)
- Also useful if you want to break down glucans when using a high percentage of glucan-rich malts, like wheat and rye (at least 25%)

PRACTICAL STEPS

Traditional Step Mash

Protein Rest
113º-122º for 10-20 min.

Beta Rest
144º-147º for 30-45 min.

Alpha Rest
156º-158º for 30-45 min.

Mash Out
170º for 10 min.

Hochkurz Mash

Beta Rest
144º for 30-45 minutes

Alpha Rest
158º for 30-45 minutes

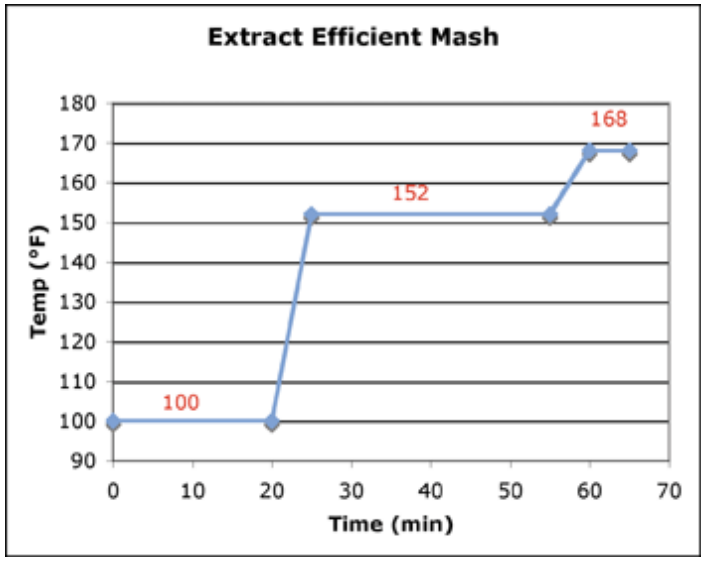
Mash Out
170º for 10 minutes

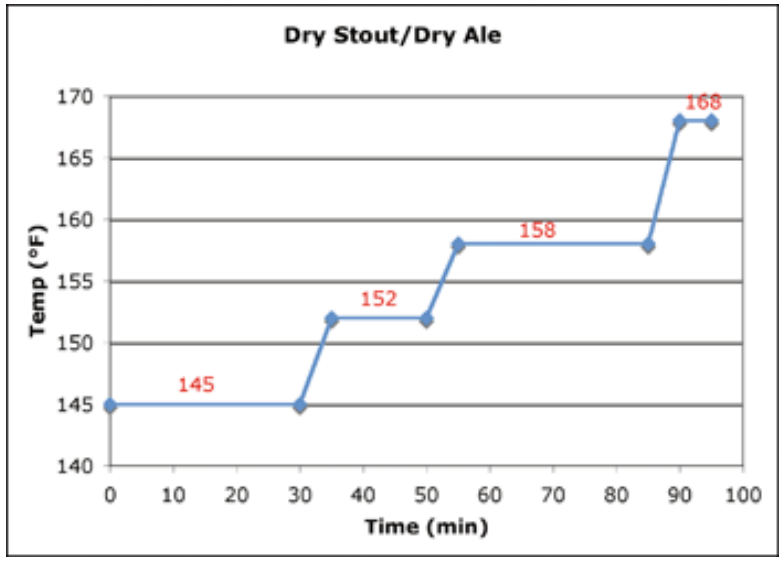
Ferulic Rest

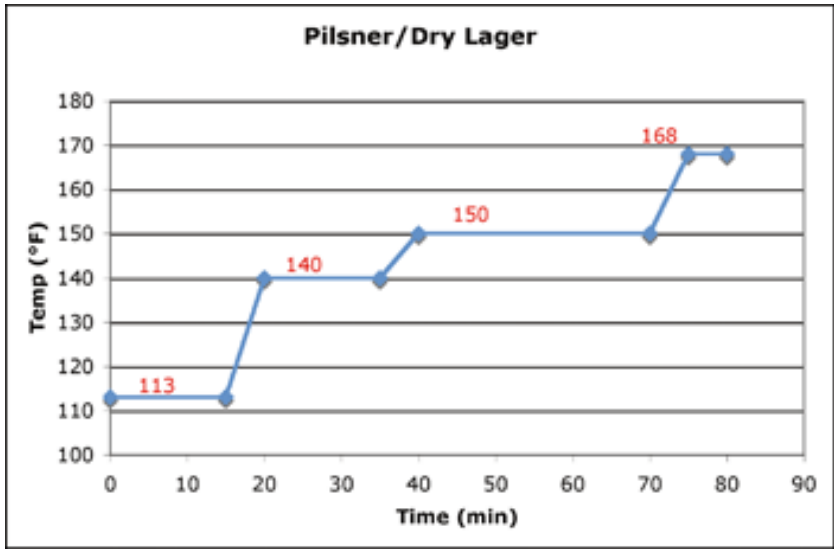
109º-113º for 10 minutes at the start of your schedule

This promotes the production of 4-vinyl-guaiacol (4VG) during fermentation, whichcan accentuate clove aroma in wheat beers, such as Hefeweizens

YET MORE PRACTICAL STEPS







FINAL CONSIDERATIONS

- Step mashing is one more tool in a brewer’s toolbox. But your recipe should always dictate your mash schedule.

- Employing a step mash tends to result in a drier beer.

- Using a protein rest on fully modified malts can result in a thin, watery beer, so look at your grist first and determine the length and temperature (both a shorter rest and a higher temp will result in less glucan breakdown).

A BIT MORE IN-DEPTH READING

- Here’s a great article by Dave Green on BYO: The Science of Step Mashing
- Of course, John Palmer has an in-depth chapter in How to Brew
- Wikibooks has a good article
- Here’s a very detailed and helpful post on HombrewTalk
- This is a good post on The Grainfather Site

ON BEHALF OF THE LAMBERT FAMILY

THANK YOU!

MASH ANNOUNCEMENTS

Floor is free

BoTY Competition

August: Brown British Beer (13A-C)

Looking ahead

September: Strong Belgian Ale (25A-C)
October: German Wheat Beer (10A-C)
November: Specialty Beer (34B&C)