



Brew in a Bag

All Grain Brewing Method

Adam Wyss



Brew in a Bag

TOPICS

Origin

What is Brew in a Bag?
Where did it come from?

Method

How does Brew in a Bag work?

Tips

What have I learned from doing Brew in a Bag?

Resources

More information on Brew in a Bag



WHAT IS BREW IN A BAG?

- Brew in a Bag (BIAB) is an all grain brewing method that uses one vessel... and a bag.



VS.



WHERE DID BIAB COME FROM?


- BIAB is attributed to an Australian home brewing forum where someone asked the question – Why can't we brew all in one vessel?
- The forum participants began brainstorming.
- The idea of using a bag came up and BIAB was born.





THE ESSENCE OF BIAB

Brew process...

- All liquor needed for the brew is added to the kettle and heated to strike temperature.
 - At strike temperature, a bag is added to the kettle and the entire grain bill is added to start the mash.
 - The mash temperatures are maintained by occasional heat applications and stirring for usually 90 minutes.
 - The bag which holds the mash is removed at the end of the mash period.
 - Follow same boil process as extract/all grain.
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BIAB EQUIPMENT

A Bag

- Bag shapes
 - Square/Rectangular
 - Truncated Cone (Recommended)
- Bag Material
 - The best material is known as “Voile”
 - 100% polyester or nylon
- Bag material test:
Fill it with flour and shake it, the flour would come through but nothing else would.

A Large Pot

- The pot needs to be large enough to hold the full volume of liquor and grain.



LESSONS LEARNED: BAGS

- More Beer has square bags for their 8 & 15 gal kettles.
 - Inexpensive and pre-made
- Custom made truncated cone bags fit your pot better.
 - Use the correct fabric porosity and fabric material
 - Do the math ([use the spreadsheet](#)) and draw out the pattern for making the bag

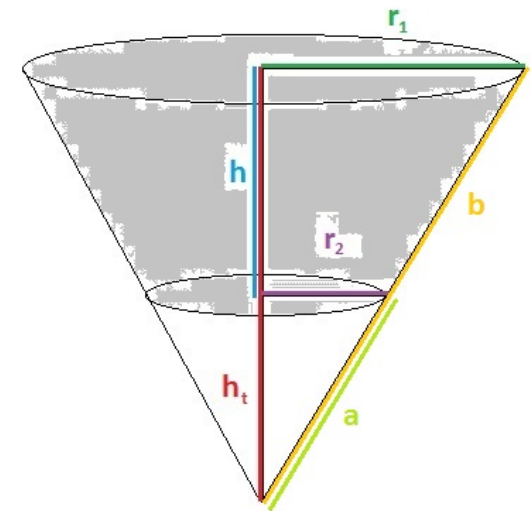
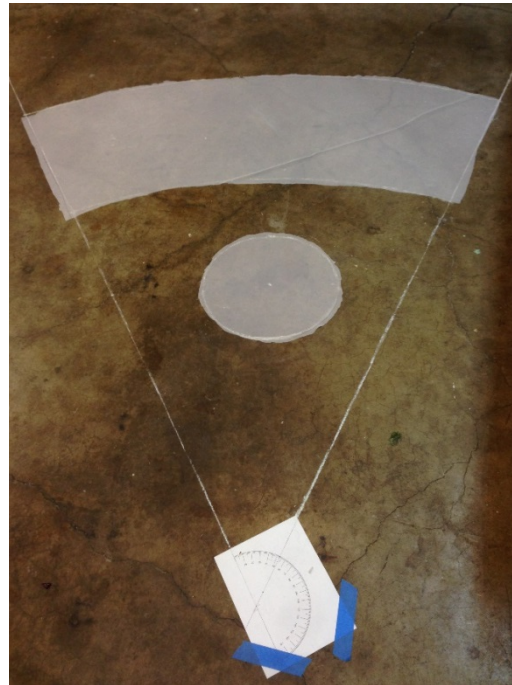
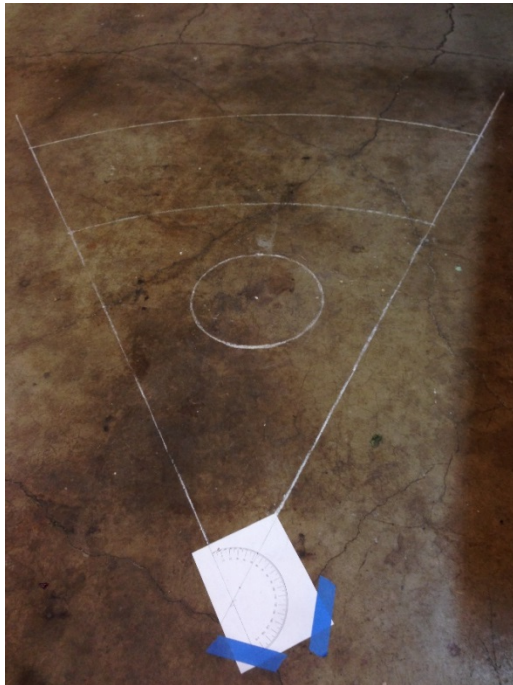


figure 1

(grey represents the frustum-shaped bag)


TRUNCATED CONE BAG

- There is a BIABrewer.org thread that describes how to do it and has formulas to calculate the angles and arches.
- Cut out the pieces, and sew it together.





LESSONS LEARNED: PROCESS

- Stir often
 - Efficiencies as high as 80+% are reported.
 - I've got 78% (higher than my 3 vessel system)
 - I get higher efficiency if I increase mash duration to 90 minutes and raise the temperature for mash out before removing the bag.
 - Hang the bag over the pot to drain, or put it in a bucket and dump the drained wort in the kettle later.
 - Use software to calculate strike temp and volume.
 - BeerSmith or [BIABacus](#)
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LESSONS LEARNED: EQUIPMENT

- DON'T trust the temperature gauge on the side of your kettle when the bag is in the kettle.
 - Use a digital thermometer to take measurements.
- With a heavy bottom kettle, you can heat directly without burning the bag. (your mileage may vary)
- A false bottom can provide a buffer to further reduce burning the bag or grain.
 - Also provides bag failure mitigation.



BIAB RESULTS

- BIAB Session Amber brewed 2/20/13
 - 60% efficiency
- BIAB Saison brewed 9/29/13
 - Scored 37.5 at California State Home Brew Comp
 - 55% efficiency
- BIAB Saison brewed 2/2/14
 - 69% efficiency (75 min mash). 33.5 points first round NHC.
- BIAB Citra Pale Ale brewed 3/2/2014
 - 65% efficiency. First brew with truncated cone bag (10gal)
- BIAB English Summer Ale brewed 4/27/2014 (10gal)
 - 76.3% efficiency (correct bag, 90 min mash, mash out)
- BIAB Saison brewed 6/6/2014 (10gal)
 - 78.4% efficiency (bag, 90 min mash, mash out, drained bag)






BIAB SUMMARY

Pros

- Less equipment – less space
- Lower cost – no mash tun/HLT
 - Suitable bags can be bought or made for low cost
- Less equipment to clean
- Shorter brew day – no sparge
- No stuck mashes
- Less propane

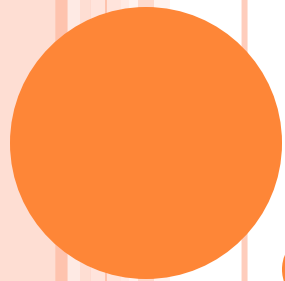
Cons

- Cloudier wort. But whirlflock will mitigate.
 - Many myths and misconceptions
 - Less information/focus for BIAB
 - Fewer reasons buy fancy equipment
 - Making your own custom bag requires a few hours and sewing equipment/skills
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BIAB RESOURCES

- BeerSmith Podcast #10 – Brew in a Bag Down Under
<http://beersmith.com/blog/2011/02/24/brew-in-a-bag-biab-down-under-beersmith-podcast-10/>
- BeerSmith Podcast #77 – Brew in a Bag w/Jake Keeler
<http://beersmith.com/blog/2014/03/11/brew-in-a-bag-biab-with-jake-keeler-beersmith-podcast-77/>
- Brew Strong 9/6/2010 – Brew in a Bag
<http://thebrewingnetwork.com/shows/670>
- Dedicated Forum
www.BIABrewer.org
- Bag Construction – Truncated Cone Bag
<http://www.biabrewer.info/viewtopic.php?f=53&t=2052>
- Bag Purchase
 - 24" (B3 8gal Pot) – <http://morebeer.com/products/bag-24-mesh-grain.html>
 - 29" (B3 15gal Pot) – <http://morebeer.com/products/bag-29-brew-biab.html>
 - Custom Bag – <http://biabbags.webs.com/>





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