



Jarhead

American Pale Ale

This American Pale Ale is a guns blazing shot to the system with a touch of caramel residual sweetness to carry a classic bunch of American Hops. Not too flower powery, more like a grenade of smooth pine with grapefruit to boot cadet!

INSTRUCTIONS:

CLEANING & SANITISING

First, clean all equipment if not already ready clean. We recommend using [StellarClean PBW](#) for this. All 'cold side' equipment – spoon, fermenter, bottles etc must also be sanitised.

All equipment that will come into contact with your brew post boil must be sanitised with a quality no-rinse sanitiser, such as [StellarSan](#).

REQUIRED EQUIPMENT:

- ✓ 15mBK kit from KegLand
- ✓ 15L Cooking Pot (or larger)
- ✓ Probe Thermometer
- ✓ Fermenter (a 30L Flat Bottom FermZilla is perfect!)
- ✓ Cleaner (StellarClean PBW)
- ✓ Sanitiser (StellarSan No-Rinse)
- ✓ Bottles and bottling equipment
- ✓ Long handled tongs
- ✓ Heat proof rubber gloves
- ✓ Stainless or heat resistant long handled spoon



RECIPE CHECKLIST



- 2 x Light DME
- 1 x Beer Enhancer 3
- 1 x Steeping Grains
- 1 x Lallemand BRY-97 Yeast Sachets 11g
- 25g Magnum Pellet Hops
- 25g Centennial Pellet Hops
- 25g Columbus Pellet Hops
- 1 x Hop Sock

BREW SPECIFICATION

Volume	22 Litres
IBU	31
OG	1.050
est. FG	1.011
ABV %	5.1
Colour (EBC)	14

1 STEEPING GRAINS

Carefully pour your pre-milled steeping grains into the supplied hop sock. *Note – make sure you tie one end of the sock first!* Once filled, tie the other end of the sock in order to contain the grain. The looser the hop sock around the grain, the better the extraction will be.

Fill your brew kettle (a pot of 15L or more is required) with 5L of hot water. If your tap water is over 50°C then this will be fine, otherwise you can heat 5L of water on the stove top to no more than 70°C.

Do not exceed 70°C for this step. The exact temperature is not important as long as it is between 50-70°C.

Steep the malt filled hop sock in the 5L of hot water for 30 minutes – see notes for more information. It does not need to be maintained at a constant temperature, simply insert the hop sock and leave it.

Once the steep has finished, carefully remove the malt filled hop sock using long handled tongs or similar. For best results, try to squeeze as much liquid from the hop sock as you can back into the pot. You must wear heat proof rubber gloves for this to avoid scalding.

STEEPING GRAINS	
Steeping Water	5 Litres
Steeping Temp	70°C
Steeping Time	30 mins

2 BOILING THE DRY MALT EXTRACT

Once the steeping grains are removed, please add the Dry Malt Extract (DME) and Beer Enhancer* according to the recipe.

**If required*

Any left over ingredients can be stored in a sealed air tight container.

Now it is time to turn on the heat to bring this to a boil. Stir well while this comes to a boil to ensure the DME and Beer Enhancer fully dissolve.

Once this is boiling ensure you keep an eye on this process as you may need to turn the heat down to prevent boilovers.

We recommend using a hop sock for the hops, as this helps greatly when transferring the wort to the fermenter. As with the malt, the looser the hops are in the hop sock the better the utilisation will be.

Boil the DME/Beer Enhancer (if required) for 15 minutes, adding hops according to the schedule. IE: 15 minutes means boil the hops for the full 15 minutes.

Next, top up the pot with at least 8L cold tap water. If your pot is larger than 15L you may use more than this, as long as the total volume is not exceeded. The colder the water the better, as this step helps to get the wort down to a safe temperature for the fermenter/pitching the yeast.

****Total Volume:** Top up to this volume in the fermenter

THE BOIL	
Boil Time	15 mins
Boil Volume	~5L
Dry Malt Extract	2 kg
Beer Enhancer 3	1 kg
50g Magnum Hops	15 mins
Total Volume**	22 litres

3 TRANSFERRING TO THE FERMENTER AND PITCHING THE YEAST

If the temperature of the wort is below 45°C then it may safely be poured into the fermenter and topped up. If the temperature of the wort in the pot is above this then fill the fermenter with sufficient cold water to achieve the desired volume of wort once the contents of the pot are added.

For example, if the recipe calls for 24L total, and there is 12L wort in the pot, add 12L cold water to the fermenter. Before transferring the wort to the fermenter ensure that the fermenter has been cleaned and sanitised.

Remove the hop sock(s) from the pot.

Carefully pour the contents of the pot (the wort) into the fermenter and then top up as required to the volume needed for the recipe.

The yeast can be pitched once the temperature of the wort in the fermenter is below 25°C.

Before pitching the yeast, carefully stir the wort in the fermenter with a sanitised, long handled spoon, to ensure homogeny. Once stirred, best practice is to take a small gravity sample in order to know the Starting Gravity of the wort (SG). This is not strictly necessary for 15mBK recipes, as the gravity will be within a couple of points as long as the instructions are followed.

Open the yeast sachet(s) and carefully sprinkle the yeast onto the wort. There is no need to stir the yeast in.

If using an airlock, half fill it with sanitiser at the correct dilution.

Carefully move the fermenter to the fermentation chamber or an area with a stable temperature for fermentation

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THE FERMENTATION

Open the yeast sachet(s) and carefully sprinkle the yeast onto the wort. There is no need to stir the yeast in.

If you are using temperature control, the ideal schedule for this beer is 18°C for the first 3-5 days, then raise to 20-22°C until fermentation is finished. If you do not have temperature control, then try to keep your fermenter in an area where the temperature will not exceed 20-22°C. The first 24 hours after pitching the yeast are the most critical in ensuring you do not get undesirable off flavours from fermentation.

A great way to ensure you get consistently great beer is to get a small cheap/free fridge from Gumtree and make a fermentation chamber. This can be done easily with an inexpensive [temperature controller](#) and a [heat belt](#) or [wrap](#). You just plug the fridge and heat belt into the temperature controller and put the fermenter in the fridge, dial in the temperature and forget about it.

The absolute best way is to invest in a [RAPT Fermentation Chamber](#) and pair it with a [RAPT Pill!](#)

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THE DRY HOP (IF REQUIRED)

Feel free to experiment with the dry hop – different times and temperatures can give quite different results.

For the best results, add the dry hops at the end of fermentation. If you are using a pressure capable fermenter, then set the spunding valve to around 12psi after adding the hops.

Add 25 g of Centennial and 25g Columbus hops once fermentation is complete.

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TRANSFERRING THE FINISHED BEER

Once fermentation is done, it is time to transfer your finished beer! Ideally, cold crashing for at least 48 hours will give the best results before transferring. If you cannot cold crash, best practice is to move the fermenter to the bottling area at least a couple of hours (ideally one day) before transferring, to allow the trub to settle out in the fermenter.

To determine that fermentation has finished, check that gravity is stable across three consecutive days. If so, fermentation is done and the beer can be transferred. Airlock activity can be an indicator that the beer has finished fermenting, but a stable gravity over three days is the only way to be certain.



Do not transfer until fermentation is complete, especially when bottling the finished product.

To achieve carbonation of the finished beer, priming sugar needs to be added before transferring the beer to bottles.

To bulk prime, add the required amount of dextrose to the fermenter and carefully stir it with a sanitised, long handled spoon. 11g Dextrose per litre of fermented beer is a good guideline. Try to avoid disturbing the trub at the bottom of the fermenter.

This style calls for 140 grams Dextrose for carbonation to style.

Before bottling, ensure all bottles are cleaned and sanitised. Your bottling wand will also need to be sanitised. Take a final gravity reading before bottling – this allows you to calculate the ABV of the finished beer.

Add the priming sugar to the fermenter as required.

When transferring with a bottling wand, please ensure that care is taken to fill the bottle from the bottom up as much as possible. At this stage of brewing, oxygen is the enemy!

If using a bottling wand (recommended) fill the bottle until it just overflows – once the wand is removed it will leave a perfect amount of headspace.

Once all bottles are filled and capped, the beer needs to be left at room temperature for at least two weeks to carbonate.

After this time, best practice is to store the bottles in a cool place or refrigerated if possible.

The bottles need at least 24 hours refrigeration before opening to drink – less then this can lead to ‘gushing’ or insufficient carbonation.

Kegging your beer: Refer to our detailed beginners guide for kegging from a fermenter here:

<https://www.kegland.com.au/blogs/keglearn/blog-post-how-to-keg-your-beer-a-basic-guide>

Canning your beer: Refer to our detailed beginners guide for canning here:

<https://www.kegland.com.au/blogs/keglearn/blog-post-how-to-can-your-beer-a-beginners-guide>

Notes on steeping grains

Steeping grains is done for these recipe kits as a way to add great malt flavour and colour to the beer.

Steeping grains is different to mashing malt in that we do not need to achieve enzymatic conversion, so the amount of water used and the temperature of the water is not critical.

There are a few ways to get a good result with steeping grains. To minimise the time on your actual brew day, you can do a cold steep – simply steep the grains in the hop sock in cold water from the tap for up to 24 hours. This will actually achieve slightly higher flavour and colour extraction than a short, hot steep.

If you are in a hurry, you can cut the steeping time down to 15 minutes. You will not get quite as much flavour or colour extraction as you will with a full 30 minute steep but this is still sufficient to make a great beer!

You can try steeping for longer than 30 minutes, but our testing has shown that a 30 minute steep in 50-70°C water is optimum for flavour and colour extraction.