

## Brew day sheet- Lager 4.5 Litre

This brew day sheet provides instructions which are specific to your recipe pack. Points in this Brew day sheet which are numbered and marked in **bold** are further explained in the brewing guide.

### Mashing

Mix the crushed grain into heated water.

	Recommended	Actual	Record Mash Time
1. <b>Strike Water volume:</b> The starting amount of heated water. <b>A</b> = Grainfather /Bulldog all in one brewing system. <b>B</b> = Single pot vessel	<b>A:</b> 7 Litres <b>B:</b> 5 Litres		Started:
2. <b>Strike water temperature:</b> The Ideal temperature of the heated water prior to mixing in the grain.	76°C		Finished:
3. <b>Mashing temperature:</b> Temperature of the 'mash' after grain is mixed in.	65°C		Total:

Maintain the mash temperature for 1 hour.

### Sparging

Sparging rinses the remaining sugars off the mashed grains using heated water, and brings your wort up to a pre-boil volume.

	Recommended	Actual
4. <b>Sparge Water volume:</b> The recommended amount of hot water to be prepared for rinsing (sparging) the grains. NOTE this is a recommendation, more or less may be required in order to collect the pre-boil wort volume, indicated at 6.	2-4 litres (or a 2 litre kettle on constant standby)	
5. <b>Sparge water temperature:</b> The temperature of the heated sparge water.	76°C	
6. <b>Pre-boil wort volume:</b> Total target volume of wort to be collected in the boiler. NOTE this is general recommendation which may vary.	8 Litres	

### Boiling

Bring the heat back up to the boil and maintain a rolling boil.

	Recommended Time	Start Time	Finish Time
1. <b>Boil Length:</b> Length of time the wort is boiled for.	60 minutes		

### Hop Additions

Weigh out hops from your labelled hop packets according to the recommended weights. Add these hops to the boiling wort at the recommended time intervals from the start of the boil to provide bitterness, aroma, and flavour.

7. Hop Pack	Weight	Recommended boil time	Time added
A	6g	60 minutes	
A	1g	5 minutes	
A	1g	0 minutes	

**Cooling**

Rapidly chill the wort by placing the pot in a sink of iced water, or use a 'wort chiller'. Cool the wort to 18-23°C and transfer it to a **sanitised** fermentation vessel.

**Fermentation**

Once wort is collected in a **sanitised** fermenter check the temperature is between (18-23 °C) and record a hydrometer reading. If your hydrometer reading is higher than the recommended original gravity, you can adjust this to match the recipe by adding water. Pitch the yeast, seal the fermenter and add an airlock or blow off tube. Allow it to ferment at 18-23°C for 7 to 10 days or until fermentation looks complete and is confirmed with stable hydrometer readings over a 24 hour period (see below).

**Targets**

	Desired	Actual
1. <b>Volume Collected</b> (Volume in the fermentation vessel)	4.5 Litres	
2. <b>Original Gravity</b> (Hydrometer reading before adding yeast)	1.052	
3. <b>Finishing Gravity</b> (Hydrometer reading after fermentation)	1.013	
4. <b>Calculate the ABV</b>	5%	

**Bottling and Priming**

Use your hydrometer to check fermentation has finished. Two consecutive readings 24 hours apart with no movement in readings will confirm your beer has finished fermenting. Carefully siphon the beer off the sediment directly into bottles, keg, barrel or secondary bottling vessel.

	Recommended	Amount used
1. <b>Bulk priming sugar</b>	29g	
2. <b>OR sugar per 500 ml bottle</b>	2g (<half teaspoon)	

After bottling, kegging, or putting in a barrel, store at room temperature for 10 days to carbonate. Condition at room temperature or cooler (4-23 °C) for another 3 weeks before drinking.

**Customisation options**

Description	What to add (per gallon)	When to add
Cologne Lager style	Use the traditional Kolsch style Cologne lager WLP029	Replacement yeast.
Dry-hopped – for a delicate aroma	25g Ella/Mandarina Bavaria/Styrian Wolf	Dry hop after fermentation for 4 days.