

# PiwoWarZone Best Bitter

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **30**
- SRM **9.3**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11 liter(s)**
- Total mash volume **15.4 liter(s)**

## Steps

- Temp **66 C**, Time **90 min**

## Mash step by step

- Heat up **11 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **90 min** at **66C**
- Sparge using **19.8 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	maris otter pale ale	3.8 kg (86.4%)	81 %	5
Grain	Caramel/Crystal Malt - 120L	0.4 kg (9.1%)	72 %	200
Grain	Wheat, Flaked	0.2 kg (4.5%)	77 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	pilgrim	15 g	60 min	10.3 %
Aroma (end of boil)	pilgrim	10 g	15 min	10.3 %
Aroma (end of boil)	pilgrim	25 g	5 min	10.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London Ale III	Ale	Liquid	125 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	kwas mlekowy	4 g	Mash	---
Water Agent	gips piwowarski	2 g	Mash	---

## Notes

- kwas mlekowy w ml  
*Jan 3, 2020, 5:07 PM*