

# BROWN PORTER Z PK

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **26**
- SRM **12.3**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.1 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Thomas Fawcett Halcyon	3.4 kg (64.8%)	80.5 %	5
Grain	Fawcett - Brown	0.45 kg (8.6%)	72 %	180
Grain	Fawcett - Crystal	0.4 kg (7.6%)	70 %	160
Grain	Fawcett - Pale Chocolate	0 kg	71 %	600
Grain	Weyermann - Pale Ale Malt	1 kg (19%)	85 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	15 g	60 min	14.3 %
Boil	Bramling	15 g	15 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
M15 mangrove jack`s	Ale	Dry	11.5 g	---