

## belgian PA

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- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **77**
- SRM **3.5**
- Style **Belgian Pale Ale**

### Batch size

- Expected quantity of finished beer **14.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

### Steps

- Temp **65 C**, Time **65 min**

### Mash step by step

- Heat up **8.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **65 min** at **65C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **18.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	1 kg (34.5%)	80.5 %	2
Grain	Briess - Pale Ale Malt	1.5 kg (51.7%)	80 %	7
Grain	Briess - Wheat Malt, White	0.4 kg (13.8%)	85 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	60 min	12 %
Boil	Mandarina Bavaria	15 g	60 min	10 %
Boil	Simcoe	15 g	20 min	13.2 %
Aroma (end of boil)	Mandarina Bavaria	15 g	15 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
mangrove jack's M31	Ale	Dry	7 g	---