

Pale Ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **31**
- SRM **5.5**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **16 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **9.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **16 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3 kg (93.8%)	85 %	7
Grain	Carahell	0.2 kg (6.3%)	77 %	26

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Golding	20 g	60 min	5 %
Boil	Willamette	20 g	15 min	5 %
Aroma (end of boil)	Golding	10 g	5 min	5 %
Aroma (end of boil)	Willamette	10 g	5 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis