

#13 Pale Ale

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **33**
- SRM **4.5**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **7.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **8.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.1 liter(s)**
- Total mash volume **6.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **5.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **5.1 liter(s)** of **76C** water or to achieve **8.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.7 kg (100%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	8.8 %
Aroma (end of boil)	Kent Goldings	10 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	4 g	Safale

Extras

Type	Name	Amount	Use for	Time
Other	Irish moss	1.5 g	Boil	15 min