

Pal Ale Malt

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **19**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **67 C**, Time **70 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.4 kg (59.1%)	85 %	6
Grain	Extra Pale Premium Pilsner Malt	1.9 kg (33%)	80 %	4
Grain	pszeniczny viking malt	0.45 kg (7.8%)	82 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	20 g	65 min	6.1 %
Boil	Willamette	10 g	10 min	6.1 %
Boil	Fusion UK	10 g	10 min	4.57 %
Boil	Fusion UK	20 g	5 min	4.57 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	fermentis