

## Pale Ale wg. TB

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **59**
- SRM **4.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (80%)	80 %	5
Grain	Strzegom Monachijski typ I	0.6 kg (15%)	79 %	16
Grain	Bestmalz Carmel Pils	0.2 kg (5%)	75 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Phoenix	30 g	60 min	11 %
Boil	Progress	40 g	10 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	---