

Pale Ale

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **43**
- SRM **7.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **29.5 liter(s)**

Steps

- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **67.5C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	6 kg (97.6%)	79 %	6
Grain	Strzegom Karmel 300	0.15 kg (2.4%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12 g	60 min	13.5 %
Boil	Marynka	15 g	60 min	10 %
Boil	Citra	22 g	20 min	13.5 %
Dry Hop	Cascade PL	40 g	4 day(s)	5.2 %
Dry Hop	Cascade PL	40 g	2 day(s)	5.2 %

Yeasts

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