

English Pale Ale

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **28**
- SRM **7.3**
- Style **Extra Special/Strong Bitter (English 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (88.9%)	79 %	6
Grain	Strzegom Karmel 150	0.15 kg (3.3%)	75 %	150
Grain	Karmelowy Czerwony	0.35 kg (7.8%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	20 g	60 min	10.5 %
Aroma (end of boil)	Fuggles	20 g	10 min	4.5 %

Yeasts

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