

# PALE ALE 13 Beta-0.1

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- Gravity **12.8 BLG**
- ABV ---
- IBU **25**
- SRM **7.6**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.23 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.7 liter(s)**

## Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4.3 kg (92.5%)	79 %	6
Grain	Karmelowy Czerwony	0.35 kg (7.5%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kent Goldings	30 g	60 min	5.5 %
Boil	Fuggles	20 g	15 min	4.5 %
Boil	Fuggles	10 g	5 min	4.5 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	3 g	Boil	10 min