

## Polskie Ale (Cascade PL)

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **35**
- SRM **5.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **75 min**
- Evaporation rate **12 %/h**
- Boil size **30.2 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **32.2 liter(s)**
- Total mash volume **38 liter(s)**

### Steps

- Temp **20 C**, Time **0 min**
- Temp **66 C**, Time **90 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **32.2 liter(s)** of strike water to **20C**
- Add grains
- Keep mash **0 min** at **20C**
- Keep mash **90 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **3.9 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (85.5%)	80 %	5
Grain	Strzegom Pszeniczny	0.5 kg (8.5%)	81 %	6
Grain	Viking Dekstrynowy	0.15 kg (2.6%)	79 %	13
Grain	Strzegom Karmel 150	0.1 kg (1.7%)	75 %	150
Grain	Aromatic Malt	0.1 kg (1.7%)	78 %	51

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Cascade PL	10 g	75 min	8 %
Boil	Cascade PL	10 g	40 min	8 %
Boil	Cascade PL	10 g	30 min	8 %
Boil	Cascade PL	15 g	20 min	8 %
Boil	Cascade PL	15 g	10 min	8 %
Boil	Cascade PL	20 g	5 min	8 %
Aroma (end of boil)	Cascade PL	20 g	0 min	8 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Danstar - Nottingham	Ale	Slant	150 ml	Danstar