

api

- Gravity **13.1 BLG**
- ABV ---
- IBU **85**
- SRM **5.6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **46 liter(s)**
- Trub loss **5 %**
- Size with trub loss **48.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **58.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **32.7 liter(s)**
- Total mash volume **43.6 liter(s)**

Steps

- Temp **62 C**, Time **18 min**
- Temp **67 C**, Time **25 min**
- Temp **72 C**, Time **16 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **32.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **18 min** at **62C**
- Keep mash **25 min** at **67C**
- Keep mash **16 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **36.4 liter(s)** of **76C** water or to achieve **58.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	8.7 kg (79.7%)	80 %	7
Grain	Pszeniczny	0.57 kg (5.2%)	85 %	4
Grain	zakwaszający	0.24 kg (2.2%)	--- %	---
Grain	Strzegom Karmel 30	0.4 kg (3.7%)	75 %	30
Grain	Strzegom Monachijski typ I	1 kg (9.2%)	79 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	60 g	60 min	13 %
Boil	Magnum	50 g	60 min	13.5 %
Boil	Lublin (Lubelski)	45 g	20 min	4 %
Boil	Lublin (Lubelski)	30 g	15 min	4 %
Boil	Cascade	40 g	5 min	6 %
Boil	Cascade	22 g	0 min	6 %
Dry Hop	Mosaic	50 g	7 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis