

- Gravity **10 BLG**
- ABV **4 %**
- IBU **40**
- SRM **5.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.1 liter(s)**

Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **70 C**, Time **60 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	1.5 kg (31.2%)	79 %	6
Grain	Pszeniczny	1.5 kg (31.2%)	85 %	4
Grain	Strzegom Monachijski typ II	1 kg (20.8%)	79 %	22
Grain	Płatki jaglane	0.2 kg (4.2%)	85 %	3
Grain	Amber Malt	0.25 kg (5.2%)	75 %	43
Grain	płatki gryczane	0.2 kg (4.2%)	--- %	---
Grain	słód zakwaszający	0.16 kg (3.3%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	16.8 %
Boil	Chinook	40 g	15 min	10 %
Whirlpool	Cascade	20 g	0 min	6 %
Whirlpool	Chinook	10 g	0 min	10 %
Dry Hop	Cascade	30 g	4 day(s)	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	7 g	Safale