

- Gravity **10 BLG**
- ABV **4 %**
- IBU **103**
- SRM **4.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **75 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.9 kg (82.9%)	79 %	6
Grain	Płatki owsiane	0.4 kg (11.4%)	85 %	3
Grain	Caramunich® typ I	0.2 kg (5.7%)	73 %	80

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Mosaic	40 g	15 min	11 %
Boil	Mosaic	10 g	5 min	11 %
Whirlpool	Amarillo 80st	50 g	45 min	9.5 %
Whirlpool	Centennial 80st	50 g	45 min	10.5 %
Dry Hop	Columbus/Tomahawk/Zeus	40 g	3 day(s)	15.5 %
Dry Hop	Amarillo	50 g	3 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	---