

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **39**
- SRM **6.8**

Batch size

- Expected quantity of finished beer **190 liter(s)**
- Trub loss **2 %**
- Size with trub loss **197.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **3 %/h**
- Boil size **209.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **114 liter(s)**
- Total mash volume **152 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **114 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **133.4 liter(s)** of **76C** water or to achieve **209.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	25 kg (65.8%)	79 %	6
Grain	Strzegom Monachijski typ I	2 kg (5.3%)	79 %	16
Grain	Acid Malt	1 kg (2.6%)	58.7 %	6
Grain	Caramel/Crystal Malt - 10L	2 kg (5.3%)	75 %	160
Grain	Pszeniczny	8 kg (21.1%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	100 g	60 min	13.5 %
Boil	Columbus/Tomahawk/Zeus	50 g	30 min	15.5 %
Boil	Simcoe	50 g	5 min	13.2 %
Boil	Amarillo	50 g	5 min	9.5 %
Boil	Waimea	50 g	5 min	17 %
Boil	Citra	50 g	5 min	12 %
Whirlpool	Centennial	200 g	20 min	10.5 %
Dry Hop	Waimea	350 g	3 day(s)	17 %
Dry Hop	Citra	150 g	3 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis