

Apa

- Gravity **16.8 BLG**
- ABV ---
- IBU **35**
- SRM **11.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **28.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **21.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5.9 kg (82.5%)	79 %	7
Grain	Strzegom Monachijski typ I	1 kg (14%)	79 %	16
Grain	Strzegom Karmel 300	0.25 kg (3.5%)	70 %	300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15 %
Boil	Centennial	25 g	20 min	10.5 %
Boil	Centennial	25 g	5 min	10.5 %
Whirlpool	Centennial	20 g	0 min	10.5 %
Dry Hop	Centennial	30 g	7 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us 05	Ale	Slant	300 ml	---