

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **58**
- SRM **3.8**
- 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 **8 %/h**
- Boil size **24.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **11.3 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (66.7%)	80 %	5
Grain	Strzegom Pszeniczny	0.5 kg (11.1%)	81 %	6
Grain	Strzegom Pilzneński	1 kg (22.2%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zeus	15 g	60 min	15.7 %
Boil	Centennial	15 g	10 min	9.5 %
Aroma (end of boil)	Zythos	20 g	0 min	15.7 %
Boil	Columbus	15 g	30 min	12.4 %
Boil	Cascade	20 g	20 min	7.1 %
Aroma (end of boil)	Centennial	15 g	0 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	1500 ml	---