

APA numer 1 na PWZ3

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **29**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	1.5 kg (31.3%)	80.5 %	4
Grain	Strzegom Pale Ale	3 kg (62.5%)	79 %	6
Grain	CARA 30	0.3 kg (6.3%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	60 min	13 %
Boil	Palisade	10 g	15 min	6.1 %
Boil	Cascade PL	20 g	10 min	5.2 %
Boil	Citra	60 g	2 min	10 %
Dry Hop	Cascade PL	30 g	4 day(s)	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	10 g	Mangrove Jack's