

APA

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **50**
- SRM **5.6**
- 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 **70 min**
- Evaporation rate **10 %/h**
- Boil size **27.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Mari Otter Extra	6 kg (89.6%)	--- %	4
Grain	Steinbach Wiedeński	0.3 kg (4.5%)	79 %	10
Grain	Grodziski pszeniczny wędzony dębem	0.3 kg (4.5%)	80 %	3
Grain	Crystal Light	0.1 kg (1.5%)	72 %	170

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	40 g	60 min	12 %
Boil	Amarillo	15 g	15 min	9.5 %
Aroma (end of boil)	Cascade	20 g	0 min	6 %
Dry Hop	Amarillo	10 g	7 day(s)	9.5 %
Dry Hop	Cascade	10 g	7 day(s)	6 %
Dry Hop	Cascade	15 g	3 day(s)	6 %
Dry Hop	Citra	10 g	3 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M15 Empire Ale	Ale	Dry	10 g	Mangrove Jack's
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