

RAJ AJL

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **36**
- SRM **7.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (74.8%)	81 %	4
Grain	Płatki żytnie	0.6 kg (11.2%)	78 %	5
Grain	Simpsons - Crystal Rye	0.25 kg (4.7%)	73 %	177
Grain	Abbey Castle	0.25 kg (4.7%)	80 %	45
Grain	Wheat, Torrified	0.25 kg (4.7%)	79 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	12.9 %
Boil	Centennial	10 g	10 min	10.5 %
Boil	Cascade	10 g	10 min	6 %
Whirlpool	Cascade	20 g	20 min	6 %
Whirlpool	Centennial	20 g	20 min	10.5 %
Dry Hop	Cascade	20 g	5 day(s)	6 %
Dry Hop	Centennial	20 g	5 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Slant	150 ml	Fermentis
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