

Co za gAPA

- Gravity **14 BLG**
- ABV ---
- IBU **50**
- SRM **6.1**
- 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 **20 %/h**
- Boil size **30 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.2 kg (42.7%)	79 %	6
Grain	Strzegom Pilzneński	2.2 kg (42.7%)	80 %	4
Grain	Biscuit Malt	0.3 kg (5.8%)	79 %	45
Grain	Orkiszowy	0.4 kg (7.8%)	85 %	4
Grain	Karmelowy	0.05 kg (1%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
Aroma (end of boil)	Mosaic	5 g	10 min	10 %
Aroma (end of boil)	Centennial	5 g	10 min	10.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	5 g	10 min	15.5 %
Aroma (end of boil)	Mosaic	5 g	5 min	10 %
Aroma (end of boil)	Centennial	5 g	5 min	10.5 %
Dry Hop	Mosaic	10 g	5 day(s)	10 %
Dry Hop	Centennial	10 g	5 day(s)	10.5 %

Dry Hop	Columbus/Tomahawk/Zeus	10 g	5 day(s)	15.5 %
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Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11 g	Safbrew