

APA Trzynastka

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **45**
- SRM **7.2**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **76.8C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	5 kg (87.7%)	80 %	8
Grain	Strzegom Karmel 150	0.2 kg (3.5%)	75 %	150
Grain	Pszoniczny	0.5 kg (8.8%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	20 g	60 min	14.2 %
Boil	Citra	20 g	20 min	14.2 %
Boil	Citra	20 g	0 min	14.2 %
Boil	Amarillo	15 g	0 min	9.5 %
Whirlpool	Citra	20 g	30 min	14.2 %
Whirlpool	Amarillo	15 g	30 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis