

## apa

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **36**
- SRM **3.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **50.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **31.5 liter(s)**

### Steps

- Temp **66 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **90 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **37.1 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	8 kg (88.9%)	80.5 %	2
Grain	Munich Malt	1 kg (11.1%)	80 %	18

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	28 g	60 min	13.5 %
Boil	Centennial	50 g	15 min	9.7 %
Whirlpool	Centennial	50 g	20 min	9.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
A20 Citrus	Ale	Slant	300 ml	Imperial Yeast

### Notes

- Warka do przetestowania drożdży A20 Citrusy. Zamierzam podzielić na pół i jeden fermentor trzymać w piwnicy (19 stopni) i drugi w mieszkaniu (latem około 24 stopni). Opis producenta: "Citrus cranks out orange and lemon aromas along with some tropical fruit. Use this strain at high temps for big ester production. A wild saccharomyces strain, it will get a bit funky without the worries of a brettanomyces strain."

Temp: 67-80F, 19-27C // Flocculation: low // Attenuation:74-78%"  
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