

## apa

- 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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