

# Dubeltówka czarownika

- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **90**
- SRM **9**
- Style **Imperial IPA**

## Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **24 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **58 C**, Time **10 min**
- Temp **64 C**, Time **80 min**
- Temp **71 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **80 min** at **64C**
- Keep mash **30 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale Zero | 3 kg (46.2%)   | 79 %  | 6   |
| Grain | Viking Pilsner malt  | 2.5 kg (38.5%) | 82 %  | 4   |
| Grain | Viking Golden Ale    | 0.7 kg (10.8%) | 80 %  | 12  |
| Grain | Viking Caramel 150   | 0.3 kg (4.6%)  | 75 %  | 150 |

## Hops

| Use for | Name     | Amount | Time      | Alpha acid |
|---------|----------|--------|-----------|------------|
| Boil    | Eureka!  | 25 g   | 60 min    | 18 %       |
| Boil    | Amarillo | 15 g   | 30 min    | 9.5 %      |
| Boil    | Eureka!  | 10 g   | 30 min    | 18 %       |
| Boil    | Amarillo | 15 g   | 15 min    | 9.5 %      |
| Boil    | Citra    | 30 g   | 15 min    | 12 %       |
| Dry Hop | Amarillo | 70 g   | 10 day(s) | 9.5 %      |
| Dry Hop | Citra    | 70 g   | 10 day(s) | 12 %       |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 20 g   | ---        |

### Extras

| Type   | Name                   | Amount | Use for | Time  |
|--------|------------------------|--------|---------|-------|
| Fining | Whirlfloc T (1szt ~2g) | 2 g    | Boil    | 5 min |