

# Dubeltówka czarownika

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- 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