

## warka 22

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **18**
- SRM **8.2**
- Style **Dark American Lager**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.7 liter(s)**

### Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **40 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **72C**
- Sparge using **19.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	hook head pilsner-irish	3.5 kg (71.2%)	80.5 %	3.5
Grain	Wheat Malt, Dark	0.25 kg (5.1%)	84 %	18
Grain	BESTMALZ - Best Minich	0.86 kg (17.5%)	80.5 %	15
Grain	Oats, Flaked	0.2 kg (4.1%)	80 %	2
Grain	Fawcett - Pale Chocolate	0.106 kg (2.2%)	71 %	600

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (USA)	40 g	40 min	3.75 %
Boil	Mosaic	20 g	5 min	11.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	100 ml	Fermentis

### Notes

- po gotowaniu wyszlo1048-12blg  
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Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.