

## warka 37

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **18**
- SRM **16.1**
- Style **American Stout**

### 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 **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2.5 kg (45.5%)	80 %	7
Grain	Weyermann - Bohemian Pilsner Malt	1.5 kg (27.3%)	81 %	4
Grain	Słód CHÂTEAU PEATED	0.6 kg (10.9%)	80 %	4
Grain	Weyermann - Dark Wheat Malt	0.25 kg (4.5%)	85 %	14
Grain	Oats, Flaked	0.25 kg (4.5%)	80 %	2
Grain	Weyermann Caramunich 3	0.25 kg (4.5%)	76 %	150
Grain	crafta special 3	0.15 kg (2.7%)	76 %	1300

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (USA)	41 g	39 min	3.75 %
Boil	Mosaic	20 g	6 min	11.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Slant	100 ml	Fermentis
--------------	-----	-------	--------	-----------

## Notes

- po gotowaniu wyszło 1050-12.5 blg  
*Feb 7, 2019, 7:38 PM*