

## Drwal (brokreacja) #3

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **68**
- SRM **31**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.2 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **73.5C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.3 kg (58.9%)	80 %	5
Liquid Extract	Żytmi	1.2 kg (21.4%)	85 %	8
Grain	Weyermann Specjal W	0.5 kg (8.9%)	68 %	300
Grain	Carafa II	0.2 kg (3.6%)	70 %	812
Grain	Karmelowy Pszeniczny Strzegom	0.2 kg (3.6%)	79 %	130
Grain	Strzegom Czekoladowy 1200	0.2 kg (3.6%)	68 %	1202

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Boil	Citra	15 g	30 min	12 %
Boil	Simcoe	15 g	30 min	13.2 %
Boil	Citra	15 g	15 min	12 %
Boil	Simcoe	15 g	15 min	13.2 %
Dry Hop	Simcoe	30 g	7 day(s)	13.2 %
Dry Hop	Citra	30 g	7 day(s)	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis