

## Dry stout

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **44**
- SRM **27.9**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

### Steps

- Temp **66 C**, Time **90 min**

### Mash step by step

- Heat up **12.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **66C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	0.9 kg (20.9%)	80 %	16
Grain	Pilzneński	2.9 kg (67.4%)	81 %	4
Grain	Barwiący	0.2 kg (4.7%)	55 %	985
Grain	Jęczmień palony	0.3 kg (7%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	40 g	10 min	5.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-04	Ale	Dry	11 g	---