

## #13 Dry Stout

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- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **16**
- SRM **45.5**
- 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 **80 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **24.1 liter(s)**

### Steps

- Temp **67 C**, Time **80 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **18.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.2 kg (59.7%)	85 %	7
Grain	płatki jęczmienne	0.5 kg (9.3%)	60 %	4
Grain	Strzegom Czekoladowy 400	0.4 kg (7.5%)	68 %	400
Grain	Weyermann - Chocolate Wheat	0.5 kg (9.3%)	74 %	900
Grain	Jęczmień palony	0.3 kg (5.6%)	55 %	1000
Grain	Płatki pszeniczne	0.36 kg (6.7%)	60 %	3
Grain	Carafa II	0.1 kg (1.9%)	70 %	812

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	30 g	60 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis