

Dry stout

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **37**
- SRM **32.1**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.7 liter(s)**
- Total mash volume **12.4 liter(s)**

Steps

- Temp **65 C**, Time **70 min**
- Temp **70 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **9.7 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **10 min** at **70C**
- Keep mash **0 min** at **76C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle malting - Maris Otter	1.8 kg (65.2%)	81 %	6
Grain	bestmalz Wiedeński	0.4 kg (14.5%)	79 %	10
Grain	Płatki owsiane	0.2 kg (7.2%)	60 %	3
Grain	Jęczmień palony	0.16 kg (5.8%)	55 %	985
Grain	Viking Czekoladowy ciemny	0.1 kg (3.6%)	67 %	900
Grain	wyermann - Pszeniczny Czekoladowy	0.1 kg (3.6%)	73 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	El Dorado	14 g	60 min	13.8 %