

Stout

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **39**
- SRM **36.7**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **3 %**
- Size with trub loss **26 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.4 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **31.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzniejszy	3.5 kg (63.6%)	80 %	4
Grain	Strzegom Czekoladowy ciemny	0.25 kg (4.5%)	68 %	1200
Grain	Strzegom pszenica prazona	0.25 kg (4.5%)	70 %	1393
Grain	Optima Karmel 150	1 kg (18.2%)	75 %	150
Grain	Strzegom Karmel 300	0.5 kg (9.1%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	8.8 %
Aroma (end of boil)	Marynka	40 g	5 min	8.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	200 ml	---