Stout 2.0

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **20**
- SRM **37.1**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **90 min**
- Evaporation rate **5 %/h**
- Boil size **61.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **33 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **80C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **50.8 liter(s)** of **76C** water or to achieve **61.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5 kg *(45.5%)*	81 %	3
Grain	Caraaroma	0.8 kg *(7.3%)*	78 %	400
Grain	Strzegom Czekoladowy jasny	1 kg *(9.1%)*	68 %	400
Grain	Pszeniczny	1.5 kg *(13.6%)*	85 %	4
Grain	Barley, Flaked	0.3 kg *(2.7%)*	70 %	4
Grain	Płatki pszeniczne	0.4 kg *(3.6%)*	85 %	3
Grain	Oats, Flaked	0.4 kg *(3.6%)*	80 %	2
Grain	Kawowy	0.4 kg *(3.6%)*	74 %	296
Grain	Fawcett - Pszeniczny Czekoladowy	0.8 kg *(7.3%)*	73 %	900
Grain	Jęczmień palony	0.4 kg *(3.6%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	8.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	100 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	Burton Salts	5 g	Mash	---
Water Agent	Gips piwowarskí	10 g	Mash	70 min

Notes

- Słód pszeniczny czekoladowy zadać przed podgrzaniem do 78 stopni.
  Jęczmień palony wyekstrahować w 1-2 l przegotowanej wody przez 4-12 h w temp. pokojowej
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