

Krzywa czekoladka

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **45**
- SRM **53.9**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **0 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale Malt	2.8 kg (59.6%)	80 %	15
Grain	Viking Munich Malt Dark	1 kg (21.3%)	78 %	57
Grain	Oats, Flaked	0.5 kg (10.6%)	80 %	4
Grain	Viking Chocolate Dark Malt	0.25 kg (5.3%)	71 %	2400
Grain	Carafa II	0.15 kg (3.2%)	70 %	2164

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	17 g	30 min	11.5 %
Boil	Mosaic (HBC 369)	30 g	15 min	12.25 %
Boil	Galaxy	30 g	0 min	14 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Fermentis