

Blacky

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **52**
- SRM **39.8**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

Steps

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

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (64.8%)	80 %	6
Grain	Monachijski	1 kg (18.5%)	80 %	16
Grain	Pszeniczny	0.2 kg (3.7%)	85 %	4
Grain	Strzegom Czekoladowy 1200	0.3 kg (5.6%)	68 %	1100
Grain	Jęczmień palony	0.2 kg (3.7%)	55 %	1225
Grain	Strzegom Barwiący	0.2 kg (3.7%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	15 g	60 min	9.3 %
Boil	Citra	25 g	20 min	13.5 %
Boil	Equinox	25 g	10 min	16.1 %
Boil	Cascade	25 g	5 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	100 ml	Fermentum Mobile