

## back in black

---

- Gravity **15.2 BLG**
- ABV ---
- IBU **52**
- SRM **36.2**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23.8 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **17.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (75.6%)	80 %	5
Grain	Płatki owsiane	0.45 kg (7.6%)	85 %	3
Grain	Strzegom Karmel 150	0.45 kg (7.6%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.45 kg (7.6%)	68 %	1200
Grain	Jęczmień palony	0.1 kg (1.7%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Boil	Cascade	25 g	15 min	6 %
Boil	Cascade	25 g	5 min	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	---