

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 | --- |