

Deep Black

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **32**
- SRM **36.5**
- 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **27.7 liter(s)**

Steps

- Temp **64 C**, Time **20 min**
- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **20.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Dust Malz Pale Ale | 2.3 kg (33.2%) | 79 % | 8 |
| Grain | Casle Malting Whisky Nature | 2 kg (28.9%) | 85 % | 4 |
| Grain | Strzegom Monachijski typ II | 1.75 kg (25.3%) | 79 % | 22 |
| Grain | Płatki owsiane | 0.3 kg (4.3%) | 85 % | 3 |
| Grain | Strzegom Czekoladowy ciemny | 0.12 kg (1.7%) | 68 % | 1200 |
| Grain | Extra black | 0.152 kg (2.2%) | 65 % | 1400 |
| Grain | Palone ziarno jeczmienia | 0.3 kg (4.3%) | 75 % | 1150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil | Northdown | 10 g | 60 min | 8.2 % |
| Boil | Warrior Queen | 10 g | 45 min | 6.2 % |
| Boil | Northdown | 15 g | 45 min | 8.2 % |

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|------|---------------|------|--------|-------|
| Boil | Northdown | 15 g | 10 min | 8.2 % |
| Boil | Warrior Queen | 15 g | 10 min | 6.2 % |
| Boil | Warrior Queen | 5 g | 5 min | 6.2 % |
| Boil | Northdown | 5 g | 5 min | 8.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--|------|------|--------|-----------------|
| Mangrove Jack's M42 New World Strong Ale | Ale | Dry | 11 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|-------|------------------|--------|---------|--------|
| Spice | cukier trzcinowy | 20 g | Boil | 15 min |