

Rebel clone

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **22**
- SRM **21.2**
- Style **Munich Dunkel**

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 **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.9 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **19.9 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ II | 2 kg (35.1%) | 79 % | 22 |
| Grain | Viking pilzneński | 1.7 kg (29.8%) | 80 % | 5 |
| Grain | Viking golden ale | 1 kg (17.5%) | 80 % | 14 |
| Grain | Viking Stód Red Ale | 0.5 kg (8.8%) | 70 % | 70 |
| Grain | Wyerman cararoma | 0.3 kg (5.3%) | 74 % | 350 |
| Grain | Weyermann - Carafa I | 0.2 kg (3.5%) | 70 % | 690 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil | Tradition DE | 30 g | 40 min | 6 % |
| Boil | Tradition De | 20 g | 10 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------------------|-------|------|--------|-----------------|
| Mangrove Jack's M84 Bohemian Lager | Lager | Dry | 11 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------|--------|---------|--------|
| Fining | Whirfloc | 5 g | Boil | 10 min |