

Porter

- Gravity **21.3 BLG**
- ABV **9.5 %**
- IBU **45**
- SRM **54.8**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **13.9 liter(s)**

Mash information

- Mash efficiency **58 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **2.1 liter(s)** of **76C** water or to achieve **13.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 1.5 kg (25.4%) | 85 % | 7 |
| Grain | Monachijski typ II 20-25 EBC Weyermann | 2.7 kg (45.8%) | 80 % | 20 |
| Grain | Weyermann Caramunich 3 | 0.6 kg (10.2%) | 76 % | 150 |
| Grain | Caraaroma | 0.8 kg (13.6%) | 78 % | 400 |
| Grain | Weyermann - Carafa II | 0.3 kg (5.1%) | 70 % | 837 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 25 g | 60 min | 10 % |
| Boil | Marynka | 15 g | 10 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale | Dry | 10.5 g | --- |