

NO. 21

- Gravity **22.7 BLG**
- ABV **10.3 %**
- IBU **46**
- SRM **36.7**
- Style **Baltic Porter**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **15 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **14.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **58 C**, Time **10 min**
- Temp **64 C**, Time **40 min**
- Temp **69 C**, Time **40 min**

Mash step by step

- Heat up **17.2 liter(s)** of strike water to **64.4C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **40 min** at **64C**
- Keep mash **40 min** at **69C**
- Sparge using **3.3 liter(s)** of **76C** water or to achieve **14.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Monachijski | 4 kg (69.6%) | 80 % | 16 |
| Grain | Wiedeński | 1 kg (17.4%) | 79 % | 10 |
| Grain | Pszeniczny | 0.25 kg (4.3%) | 85 % | 4 |
| Grain | special x | 0.1 kg (1.7%) | 50 % | 400 |
| Grain | Karmelowy Jasny 30EBC | 0.2 kg (3.5%) | 75 % | 300 |
| Grain | Extra black | 0.1 kg (1.7%) | 65 % | 1400 |
| Grain | palone ziarno jęczmienia | 0.1 kg (1.7%) | 50 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | Perle | 50 g | 60 min | 7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------|-------|------|--------|------------|
| bavarian lager m76 | Lager | Dry | 10 g | --- |