

## robust porter

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **48**
- SRM **28.6**
- Style **Robust Porter**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.3 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.3 liter(s)**
- Total mash volume **11 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **8.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **13.3 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount         | Yield  | EBC |
|-------|------------------------|----------------|--------|-----|
| Grain | BESTMALZ - Best Pilsen | 1.3 kg (47.3%) | 80.5 % | 4   |
| Grain | Monachijski            | 1 kg (36.4%)   | 80 %   | 18  |
| Grain | red crystal            | 0.2 kg (7.3%)  | 78 %   | 400 |
| Grain | Black (Patent) Malt    | 0.15 kg (5.5%) | 55 %   | 985 |
| Grain | Special B Malt         | 0.1 kg (3.6%)  | 65.2 % | 315 |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 20 g   | 60 min | 7.4 %      |
| Boil    | Mosaic  | 15 g   | 15 min | 13.2 %     |

### Yeasts

| Name                      | Type | Form   | Amount  | Laboratory       |
|---------------------------|------|--------|---------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Liquid | 1400 ml | Fermentum Mobile |