

## Robust Porter 3.0 (Black Prince)

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **29**
- SRM **30.8**
- Style **Robust Porter**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **0 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **23.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **14.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **23.3 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount         | Yield | EBC |
|-------|--------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt           | 4 kg (84%)     | 80 %  | 5   |
| Grain | Strzegom Karmel 150            | 0.14 kg (2.9%) | 75 %  | 150 |
| Grain | Brown Malt (British Chocolate) | 0.12 kg (2.5%) | 70 %  | 128 |
| Grain | Carafa II Special              | 0.25 kg (5.3%) | 70 %  | 812 |
| Grain | Jęczmień palony                | 0.25 kg (5.3%) | 55 %  | 985 |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Magnum  | 18 g   | 60 min | 13.5 %     |
| Boil    | Fuggles | 30 g   | 0 min  | 4.5 %      |

### Yeasts

| Name                      | Type | Form   | Amount | Laboratory       |
|---------------------------|------|--------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Liquid | 150 ml | Fermentum Mobile |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|             |                           |     |      |        |
|-------------|---------------------------|-----|------|--------|
| Fining      | Mech irlandzki            | 3 g | Boil | 10 min |
| Water Agent | Drożdże nieaktywne i cynk | 1 g | Boil | 10 min |