

# porter

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **29**
- SRM **24**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **52 C**, Time **5 min**
- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **12.9 liter(s)** of strike water to **58.4C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **50 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 4 kg (77.7%)   | 85 %  | 7   |
| Grain | Fawcett - Pale Chocolate  | 0.25 kg (4.9%) | 71 %  | 600 |
| Grain | Monachijski               | 0.4 kg (7.8%)  | 80 %  | 16  |
| Grain | Briess - Chocolate Malt   | 0.25 kg (4.9%) | 60 %  | 690 |
| Grain | Weyermann Specjal W       | 0.25 kg (4.9%) | 68 %  | 300 |

## Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | Warrior            | 15 g   | 60 min | 15.5 %     |
| Boil    | East Kent Goldings | 20 g   | 10 min | 5.1 %      |
| Boil    | East Kent Goldings | 20 g   | 5 min  | 5.1 %      |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                              |     |       |        |                  |
|------------------------------|-----|-------|--------|------------------|
| FM13 Irlandzkie<br>Ciemności | Ale | Slant | 200 ml | Fermentum Mobile |
|------------------------------|-----|-------|--------|------------------|