

# Robust Porter

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **38**
- SRM **38.9**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **15 min**

## Mash step by step

- Heat up **14.3 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **76C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt        | 4 kg (84.2%)   | 80 %  | 5    |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (10.5%) | 68 %  | 1200 |
| Grain | Karmelowy Czerwony          | 0.25 kg (5.3%) | 75 %  | 59   |

## Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Saaz (Czech Republic)  | 20 g   | 60 min | 2.2 %      |
| Boil                | Mosaic                 | 16 g   | 30 min | 10 %       |
| Aroma (end of boil) | Citra                  | 20 g   | 5 min  | 12 %       |
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 15 min | 15.5 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |