

# kelner

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **43**
- SRM **26.6**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

## Steps

- Temp **68.5 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **75.5C**
- Add grains
- Keep mash **75 min** at **68.5C**
- Keep mash **5 min** at **78C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield | EBC  |
|-------|--------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt           | 2.7 kg (62.8%) | 80 %  | 5    |
| Grain | Strzegom Monachijski typ II    | 1 kg (23.3%)   | 79 %  | 22   |
| Grain | Czekoladowy                    | 0.25 kg (5.8%) | 60 %  | 788  |
| Grain | Fawcett - Pale Chocolate       | 0.25 kg (5.8%) | 71 %  | 600  |
| Grain | Weyermann - Carafa III specjal | 0.1 kg (2.3%)  | 70 %  | 1024 |

## Hops

| Use for | Name   | Amount | Time   | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil    | Magnum | 20 g   | 60 min | 13.5 %     |
| Boil    | Magnum | 10 g   | 30 min | 13.5 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 12 g   | Fermentis  |

## Extras

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

|        |                 |       |           |           |
|--------|-----------------|-------|-----------|-----------|
| Flavor | laktoza         | 540 g | Boil      | 5 min     |
| Flavor | ziarna kakaowca | 100 g | Secondary | 14 day(s) |