

# Bitter

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **23**
- SRM **15.5**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **14 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **8.3 liter(s)**
- Total mash volume **10.4 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **8.3 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount          | Yield | EBC  |
|-------|----------------------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński              | 1.2 kg (57.7%)  | 80 %  | 4    |
| Grain | Pszeniczny                       | 0.31 kg (14.9%) | 85 %  | 4    |
| Grain | Fawcett - Dark Crystal           | 0.07 kg (3.4%)  | 71 %  | 300  |
| Grain | Fawcett - Brown                  | 0.1 kg (4.8%)   | 72 %  | 180  |
| Grain | Abbey Castle                     | 0.18 kg (8.7%)  | 80 %  | 45   |
| Grain | Biscuit Malt                     | 0.17 kg (8.2%)  | 79 %  | 45   |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.05 kg (2.4%)  | 73 %  | 1001 |

## Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | Marynka  | 5 g    | 60 min | 8.8 %      |
| Boil    | Izabella | 10 g   | 60 min | 5.1 %      |

## Yeasts

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

|         |     |       |       |           |
|---------|-----|-------|-------|-----------|
| Verdant | Ale | Slant | 80 ml | Lallemand |
|---------|-----|-------|-------|-----------|