

## Bitter 36

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **34**
- SRM **4.5**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **36 liter(s)**
- Trub loss **5 %**
- Size with trub loss **37.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **45.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

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

### Mash step by step

- Heat up **24 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **29.5 liter(s)** of **76C** water or to achieve **45.5 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount       | Yield | EBC |
|-------|------------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt   | 4 kg (50%)   | 80 %  | 5   |
| Grain | Strzegom Wiedeński     | 2 kg (25%)   | 79 %  | 10  |
| Grain | Karamel Pils Steinbach | 1 kg (12.5%) | 79 %  | 6   |
| Grain | Żytni                  | 1 kg (12.5%) | 85 %  | 8   |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Citra   | 40 g   | 60 min | 12 %       |
| Boil    | Cascade | 30 g   | 10 min | 6 %        |
| Boil    | Cascade | 45 g   | 0 min  | 6 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 22 g   | Fermentis  |

### Extras

| Type   | Name     | Amount | Use for | Time  |
|--------|----------|--------|---------|-------|
| Fining | wirflock | 1 g    | Boil    | 5 min |