

## Bitter #43

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **32**
- SRM **7.6**
- Style **Special/Best/Premium Bitter**

### 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Simpsons - Maris Otter    | 2.5 kg (47.2%) | 81 %  | 6   |
| Grain | Weyermann - Pale Ale Malt | 2.2 kg (41.5%) | 85 %  | 7   |
| Grain | Strzegom Karmel 150       | 0.2 kg (3.8%)  | 75 %  | 150 |
| Grain | Carahell                  | 0.4 kg (7.5%)  | 77 %  | 26  |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Marynka | 15 g   | 60 min | 5.2 %      |
| Boil                | Fuggles | 30 g   | 60 min | 4.3 %      |
| Boil                | Fuggles | 60 g   | 10 min | 4.3 %      |
| Aroma (end of boil) | Fuggles | 30 g   | 0 min  | 4.3 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | ---        |

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 7 g    | Boil    | 10 min |