

# Bitter 2024

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **7.3**
- Style **Standard/Ordinary 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 **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**

## Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount        | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Pilzneński            | 4 kg (93%)    | 81 %  | 4   |
| Grain | Cookies               | 0.1 kg (2.3%) | 77 %  | 50  |
| Grain | Weyermann - Caraamber | 0.1 kg (2.3%) | 75 %  | 65  |
| Grain | Caraaroma             | 0.1 kg (2.3%) | 78 %  | 400 |

## Hops

| Use for | Name          | Amount | Time   | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil    | Kent Goldings | 10 g   | 0 min  | 5.1 %      |
| Boil    | Marynka       | 20 g   | 60 min | 10 %       |

## Yeasts

| Name                       | Type | Form   | Amount    | Laboratory       |
|----------------------------|------|--------|-----------|------------------|
| FM10 O czym szumią wierzby | Ale  | Liquid | 222.22 ml | Fermentum Mobile |

## Notes

- Start  
*Mar 28, 2019, 11:12 PM*