

# bitter

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **35**
- SRM **7.2**
- 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 **5 min**
- Evaporation rate **10 %/h**
- Boil size **23.2 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

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

## Mash step by step

- Heat up **18 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **23.2 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount        | Yield | EBC |
|-------|---------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 4 kg (88.9%)  | 85 %  | 7   |
| Grain | Weyermann - Carared       | 0.3 kg (6.7%) | 75 %  | 45  |
| Grain | Weyermann - Carawheat     | 0.2 kg (4.4%) | 77 %  | 120 |

## Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | East Kent Goldings | 60 g   | 60 min | 4.7 %      |
| Boil    | East Kent Goldings | 40 g   | 5 min  | 4.7 %      |

## Yeasts

| Name                       | Type | Form   | Amount  | Laboratory       |
|----------------------------|------|--------|---------|------------------|
| FM10 O czym szumią wierzby | Ale  | Liquid | 1000 ml | Fermentum Mobile |