

## PILS #14

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **38**
- SRM **2.9**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **550 liter(s)**
- Trub loss **5 %**
- Size with trub loss **583 liter(s)**
- Boil time **60 min**
- Evaporation rate **2 %/h**
- Boil size **622.7 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **360.5 liter(s)**
- Total mash volume **463.5 liter(s)**

### Steps

- Temp **45 C**, Time **15 min**

### Mash step by step

- Heat up **360.5 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **15 min** at **45C**
- Sparge using **365.2 liter(s)** of **76C** water or to achieve **622.7 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount        | Yield  | EBC |
|-------|--------------------------|---------------|--------|-----|
| Grain | Weyermann - Pilsner Malt | 103 kg (100%) | 80.5 % | 3.5 |

### Hops

| Use for   | Name                 | Amount | Time   | Alpha acid |
|-----------|----------------------|--------|--------|------------|
| Boil      | Magnat               | 370 g  | 60 min | 15.6 %     |
| Whirlpool | Tettnanger           | 500 g  | 15 min | 2.9 %      |
| Whirlpool | Perle                | 1000 g | 15 min | 6.2 %      |
| Whirlpool | Hallertau Mittelfruh | 1500 g | 15 min | 3.1 %      |

### Yeasts

| Name                        | Type  | Form   | Amount  | Laboratory |
|-----------------------------|-------|--------|---------|------------|
| WLP830 - German Lager Yeast | Lager | Liquid | 4000 ml | White Labs |