

Co - Pils na XX warke!

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **28**
- SRM **4.2**
- Style **German Pilsner (Pils)**

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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.5 liter(s)**

Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **45 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------------|----------------|--------|-----|
| Grain | Castle Malting - Pilzneński 6-rzędowy | 3.5 kg (65.1%) | 80 % | 5 |
| Grain | Briess - Carapils Malt | 0.37 kg (6.9%) | 74 % | 3 |
| Grain | BESTMALZ - Best Pilsen | 1.45 kg (27%) | 80.5 % | 4 |
| Grain | Weyermann - Acidulated Malt | 0.06 kg (1.1%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil | Tradition | 30 g | 60 min | 5.4 % |
| Boil | Tradition | 20 g | 20 min | 5.4 % |
| Boil | Hersbrucker | 50 g | 5 min | 3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|-------|--------|--------|------------|
| WLP838 - Southern German Lager Yeast | Lager | Liquid | 12 ml | White Labs |

Notes

- miękka woda <5 d
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