

Pils polsko-niemiecki

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **48**
- SRM **3.8**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **34.4 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **4.9 liter(s) / kg**
- Mash size **28.3 liter(s)**
- Total mash volume **34 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **71 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **28.3 liter(s)** of strike water to **53.1C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **34.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 5 kg (86.7%) | 80 % | 4 |
| Grain | Monachijski | 0.52 kg (9%) | 80 % | 16 |
| Grain | Weyermann - Carapils | 0.25 kg (4.3%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| First Wort | Columbus/Tomahawk/Zeus | 10 g | 80 min | 15.5 % |
| First Wort | Sybilla | 40 g | 80 min | 6.5 % |
| Boil | Sybilla | 20 g | 15 min | 6.5 % |
| Aroma (end of boil) | Sybilla | 40 g | 0 min | 6.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|-------|--------|------------|
| Saflager W 34/70 | Lager | Slant | 200 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------|--------|---------|--------|
| Fining | whirlfloc | 1 g | Boil | 15 min |

Notes

- 100 wody RO
Ca 21
Mg 5
Na 8
SO 43
Cl 23
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