

Włochy

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **29**
- SRM **3.3**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **54.2 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **29.7 liter(s)**
- Total mash volume **38.7 liter(s)**

Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **29.7 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **33.5 liter(s)** of **76C** water or to achieve **54.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|----------------|-------|-----|
| Grain | Pilzneński | 8.5 kg (94.4%) | 81 % | 4 |
| Grain | Cara-Pils/Dextrine | 0.5 kg (5.6%) | 72 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|----------|------------|
| Boil | Agnus | 10 g | 60 min | 14 % |
| Boil | Agnus | 30 g | 30 min | 14 % |
| Boil | Saaz (Czech Republic) | 30 g | 30 min | 3 % |
| Aroma (end of boil) | Hallertau Mittelfruh | 50 g | 0 min | 3 % |
| Dry Hop | Hallertau Mittelfruh | 50 g | 3 day(s) | 3 % |
| Dry Hop | Agnus | 100 g | 3 day(s) | 14 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------------|
| Us-05 | Ale | Dry | 22 g | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------|--------|---------|--------|
| Fining | whirfloc | 1.25 g | Boil | 15 min |