

PILS

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **36**
- SRM **4**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **5 min**
- Temp **75 C**, Time **5 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Strzegom Pilzneński | 3 kg (66.7%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 1 kg (22.2%) | 79 % | 16 |
| Grain | Pszeniczny | 0.2 kg (4.4%) | 85 % | 4 |
| Grain | Crystal 150 Castle Malting | 0.2 kg (4.4%) | 75 % | --- |
| Grain | zakwaszający | 0.1 kg (2.2%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil | Waimea | 15 g | 50 min | 17.3 % |
| Aroma (end of boil) | Waimea | 30 g | 5 min | 17.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------|
| Saflager S-23 | Lager | Dry | 10 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------|--------|---------|--------|
| Fining | Whirlfloc T | 1 g | Boil | 10 min |