

american lager

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **18**
- SRM **3.2**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **38.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **60 min** at **68C**
- Sparge using **27 liter(s)** of **76C** water or to achieve **38.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|------------------------|-----------------|-------|-----|
| Grain | Pilzneński | 5 kg (76.9%) | 81 % | 4 |
| Grain | Steinbach Karamel Pils | 0.75 kg (11.5%) | 79 % | 6 |
| Adjunct | ryż | 0.75 kg (11.5%) | --- % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Marynka | 22.5 g | 60 min | 10 % |
| Boil | Lublin (Lubelski) | 22.5 g | 2 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|-------|--------|------------------------------------|
| Saflager S-23 | Lager | Slant | 200 ml | Fermentis Division of S.I.Lesaffre |