

Golden ale

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **19**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **23 %/h**
- Boil size **14.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **8.8 liter(s)**
- Total mash volume **11 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **8.8 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **20 min** at **73C**
- Keep mash **5 min** at **78C**
- Sparge using **8.2 liter(s)** of **76C** water or to achieve **14.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------|---------------|-------|-----|
| Grain | Oats, Flaked | 0.22 kg (10%) | 80 % | 2 |
| Grain | Biscuit Malt | 0.22 kg (10%) | 79 % | 45 |
| Grain | Pszeniczny | 0.44 kg (20%) | 85 % | 4 |
| Grain | Pilznieński | 1.32 kg (60%) | 81 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------------|--------|--------|------------|
| Boil | Tomyski | 20 g | 60 min | 3.5 % |
| Whirlpool | Styrian Wolf | 30 g | 1 min | 11.1 % |
| Whirlpool | Citra | 20 g | 1 min | 12 % |