

Otwarcie

- Gravity **13.1 BLG**
- ABV ---
- IBU **51**
- SRM **5.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 4.2 kg (90.3%) | 81 % | 4 |
| Grain | carabelge | 0.3 kg (6.5%) | 74 % | 32 |
| Grain | Pszeniczny | 0.15 kg (3.2%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|-----------|------------|
| Boil | Mosaic | 20 g | 60 min | 10 % |
| Boil | Mosaic | 20 g | 30 min | 10 % |
| Aroma (end of boil) | Mosaic | 20 g | 15 min | 10 % |
| Whirlpool | Mosaic | 30 g | 0 min | 10 % |
| Dry Hop | Mosaic | 30 g | 14 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |