

APA

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **35**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **11.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **13.7 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **10.7 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **6.9 liter(s)** of **76C** water or to achieve **14.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Bestmalz - Pale Ale | 2.2 kg (72.1%) | 80.5 % | 6 |
| Grain | Bestmalz - Pszeniczny jasny | 0.4 kg (13.1%) | 82 % | 4.5 |
| Grain | Płatki owsiane | 0.3 kg (9.8%) | 85 % | 3 |
| Grain | Acid Malt | 0.15 kg (4.9%) | 58.7 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------|--------|----------|------------|
| Boil | Warrior | 10 g | 60 min | 14.7 % |
| Boil | Simcoe | 5 g | 20 min | 13.1 % |
| Aroma (end of boil) | Simcoe | 10 g | 0 min | 13.1 % |
| Dry Hop | Mosaic | 15 g | 3 day(s) | 12 % |
| Dry Hop | Nelson Sauvignon | 60 g | 3 day(s) | 11.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 100 ml | Fermentum Mobile |