

APA numer 1 na PWZ3

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **29**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|--------|-----|
| Grain | BESTMALZ - Best Pilsen | 1.5 kg (31.3%) | 80.5 % | 4 |
| Grain | Strzegom Pale Ale | 3 kg (62.5%) | 79 % | 6 |
| Grain | CARA 30 | 0.3 kg (6.3%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Chinook | 10 g | 60 min | 13 % |
| Boil | Palisade | 10 g | 15 min | 6.1 % |
| Boil | Cascade PL | 20 g | 10 min | 5.2 % |
| Boil | Citra | 60 g | 2 min | 10 % |
| Dry Hop | Cascade PL | 30 g | 4 day(s) | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 10 g | Mangrove Jack's |