

APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **43**
- SRM **10.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **1.5 liter(s)**
- Total mash volume **2 liter(s)**

Steps

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

Mash step by step

- Heat up **1.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **24.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|--------------------|----------------|-------|-----|
| Liquid Extract | Bruntal - Pale Ale | 3.4 kg (87.2%) | 80 % | 35 |
| Grain | Płatki owsiane | 0.5 kg (12.8%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 10 g | 60 min | 15.5 % |
| Boil | Amarillo | 30 g | 20 min | 9.5 % |
| Boil | Mosaic | 20 g | 10 min | 10 % |
| Aroma (end of boil) | Mosaic | 30 g | 0 min | 10 % |
| Dry Hop | Equinox | 30 g | 5 day(s) | 13.1 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |