

APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **49**
- SRM **5.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **10 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Słód Pale Ale strzegom | 5 kg (94.3%) | 79 % | 6 |
| Grain | Aromatic Malt | 0.3 kg (5.7%) | 78 % | 50 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 15 g | 30 min | 14.5 % |
| Boil | Columbus/Tomahawk/Zeus | 12 g | 15 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 15 g | 30 min | 14.5 % |
| Boil | Columbus/Tomahawk/Zeus | 12 g | 15 min | 15.5 % |
| Dry Hop | Mosaic | 60 g | 7 day(s) | 10.4 % |
| Dry Hop | Ekuanot | 30 g | 7 day(s) | 14.5 % |
| Dry Hop | Summit | 50 g | 7 day(s) | 14.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Fermentis |