

APA festiwal

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **21**
- SRM **5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.2 liter(s)**

Steps

- Temp **67 C**, Time **65 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **73.5C**
- Add grains
- Keep mash **65 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (68.2%) | 80 % | 5 |
| Grain | Żytni | 0.7 kg (15.9%) | 85 % | 8 |
| Grain | cookie | 0.2 kg (4.5%) | 78 % | 100 |
| Grain | Płatki owsiane | 0.5 kg (11.4%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Warrior | 5 g | 60 min | 15.5 % |
| Boil | Chinook | 20 g | 15 min | 13 % |
| Aroma (end of boil) | Mosaic | 20 g | 0 min | 10 % |
| Aroma (end of boil) | Simcoe | 20 g | 0 min | 13.2 % |
| Dry Hop | Mosaic | 50 g | 3 day(s) | 10 % |
| Dry Hop | Simcoe | 50 g | 3 day(s) | 13.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 200 ml | Fermentis |