

# APA

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **38**
- SRM **5.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **2 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.8 liter(s)**

## Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23.8 liter(s)**

## Steps

- Temp **55 C**, Time **20 min**
- Temp **65 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.9 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield | EBC |
|-------|--------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt           | 4.5 kg (75.6%) | 80 %  | 5   |
| Grain | Monachijski typ II Viking Malt | 1 kg (16.8%)   | 79 %  | 20  |
| Grain | Płatki owsiane błyskawiczne    | 0.45 kg (7.6%) | 85 %  | 3   |

## Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 15 g   | 30 min | 15.5 %     |
| Boil                | Amarillo               | 20 g   | 20 min | 9.5 %      |
| Boil                | Citra                  | 30 g   | 10 min | 11.6 %     |
| Aroma (end of boil) | Amarillo               | 15 g   | 5 min  | 7.3 %      |

## Yeasts

| Name            | Type | Form  | Amount | Laboratory |
|-----------------|------|-------|--------|------------|
| FM53 Voss kveik | Ale  | Slant | 50 ml  | FM         |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 3 g    | Boil    | 10 min |

## Notes

- Uwodnić mech przed dodaniem do gotowania  
May 4, 2019, 6:38 PM