

## APAcz #2

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **29**
- SRM **5.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **62 C**, Time **10 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **20 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

### Fermentables

| Type  | Name                            | Amount        | Yield | EBC |
|-------|---------------------------------|---------------|-------|-----|
| Grain | Viking Pale Ale                 | 4 kg (88.9%)  | 79 %  | 7   |
| Grain | Viking Karmelowy<br>50 Czerwony | 0.3 kg (6.7%) | 75 %  | 50  |
| Grain | Viking Przeniczny               | 0.2 kg (4.4%) | 81 %  | 5   |

### Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Tomahawk | 10 g   | 30 min   | 15.8 %     |
| Boil                | Tomahawk | 5 g    | 20 min   | 15.8 %     |
| Aroma (end of boil) | Amarillo | 15 g   | 5 min    | 9.3 %      |
| Aroma (end of boil) | Cascade  | 15 g   | 5 min    | 7.1 %      |
| Aroma (end of boil) | Citra    | 15 g   | 5 min    | 14.2 %     |
| Aroma (end of boil) | Amarillo | 15 g   | 0 min    | 9.3 %      |
| Aroma (end of boil) | Cascade  | 15 g   | 0 min    | 7.1 %      |
| Aroma (end of boil) | Citra    | 15 g   | 0 min    | 14.2 %     |
| Dry Hop             | Amarillo | 15 g   | 3 day(s) | 9.3 %      |

|         |         |      |          |        |
|---------|---------|------|----------|--------|
| Dry Hop | Cascade | 15 g | 3 day(s) | 7.1 %  |
| Dry Hop | Citra   | 15 g | 3 day(s) | 14.2 % |

## Yeasts

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