

# MAPA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **45**
- SRM **4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **29.3 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **22.8 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **34.4 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5.5 kg (84.6%) | 80 %  | 5   |
| Grain | Strzegom Pilzniejszy | 0.5 kg (7.7%)  | 80 %  | 4   |
| Grain | Viking Wheat Malt    | 0.5 kg (7.7%)  | 83 %  | 5   |

## Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Chinook    | 25 g   | 60 min | 13 %       |
| Boil    | Mosaic     | 20 g   | 30 min | 10 %       |
| Boil    | Liberty    | 10 g   | 20 min | 4.5 %      |
| Boil    | Centennial | 20 g   | 5 min  | 10.5 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

## Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|      |       |      |      |       |
|------|-------|------|------|-------|
| Herb | mięta | 50 g | Boil | 5 min |
|------|-------|------|------|-------|