

Apa

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.1 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **18.7 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **30 min** at **72C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (93.5%) | 80 % | 5 |
| Grain | Słód pszeniczny Bestmalz | 0.2 kg (3.7%) | 82 % | 5 |
| Grain | Strzegom Karmel 30 | 0.15 kg (2.8%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Citra | 5 g | 30 min | 12 % |
| Boil | Citra | 15 g | 15 min | 12 % |
| Boil | Amarillo | 15 g | 15 min | 9.5 % |
| Aroma (end of boil) | Citra | 30 g | 5 min | 12 % |
| Aroma (end of boil) | Amarillo | 40 g | 5 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 100 ml | Fermentis |