

apa1

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **23**
- SRM **8.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński | 5 kg (71.4%) | 80 % | 4 |
| Grain | Karmelowy Jasny 30EBC | 1 kg (14.3%) | 75 % | 30 |
| Grain | Viking Melanoidynowy | 1 kg (14.3%) | 75 % | 60 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | lunga | 25 g | 60 min | 10 % |
| Aroma (end of boil) | Cascade | 100 g | 1 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|-------|--------|------------|
| US05 | Ale | Slant | 100 ml | --- |