

apa

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **33**
- 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 **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 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 | 3 kg (42.9%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 3 kg (42.9%) | 79 % | 16 |
| Grain | Strzegom Karmel 30 | 1 kg (14.3%) | 75 % | 50 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil | Magnum | 10 g | 60 min | 13.5 % |
| Boil | Citra | 10 g | 30 min | 12 % |
| Boil | Magnum | 15 g | 10 min | 13.5 % |
| Boil | Citra | 15 g | 10 min | 12 % |
| Aroma (end of boil) | Magnum | 5 g | 5 min | 13.5 % |
| Aroma (end of boil) | Citra | 5 g | 5 min | 12 % |

Yeasts

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