

aromad

- Gravity **12.4 BLG**
- ABV ---
- IBU **36**
- SRM **6.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|----------------|-------|-----|
| Grain | Pilzneński | 4.5 kg (93.8%) | 81 % | 4 |
| Grain | Karmelowy Czerwony | 0.3 kg (6.3%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------|--------|----------|------------|
| Aroma (end of boil) | Pacifica (NZ) | 50 g | 1 min | 4.8 % |
| Aroma (end of boil) | Enigma (AUS) | 33 g | 1 min | 17.2 % |
| Aroma (end of boil) | Ella (AUS) | 50 g | 10 min | 14.6 % |
| Dry Hop | Vic Secret (AUS) | 50 g | 5 day(s) | 16.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 11.5 g | --- |