

APA

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **44**
- SRM **9.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.54 liter(s) / kg**
- Mash size **34 liter(s)**
- Total mash volume **41.5 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **34 liter(s)** of strike water to **77.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **2.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | soufflet pale ale | 3 kg (40%) | 80 % | 7 |
| Grain | Carahell | 2.5 kg (33.3%) | 77 % | 25 |
| Grain | weyermann-Monachijski typ I | 2 kg (26.7%) | 80 % | 14 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------|--------|--------|------------|
| Boil | Centennial | 100 g | 20 min | 8.6 % |
| Whirlpool | citra | 50 g | 0 min | 13.2 % |
| Whirlpool | xo0932 | 100 g | 0 min | 4.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |