

APA Enigma Single Hop

- Gravity **15.3 BLG**
- ABV ---
- IBU **58**
- SRM **12.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **24.4 liter(s)**
- Total mash volume **30.5 liter(s)**

Steps

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

Mash step by step

- Heat up **24.4 liter(s)** of strike water to **67.3C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Pale Ale | 4 kg (65.6%) | 80 % | 4 |
| Grain | Monachijski | 1 kg (16.4%) | 80 % | 16 |
| Grain | Strzegom Wiedeński | 1 kg (16.4%) | 79 % | 10 |
| Grain | Strzegom Karmel 600 | 0.1 kg (1.6%) | 68 % | 601 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------|--------|--------|------------|
| Boil | Enigma (AUS) | 10 g | 60 min | 17.2 % |
| Boil | Enigma (AUS) | 23 g | 25 min | 17.2 % |
| Aroma (end of boil) | Enigma (AUS) | 33 g | 8 min | 17.2 % |

Yeasts

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