

#167 NE APA

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **20**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **67 min**
- Evaporation rate **10 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **4.8 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **19.4 liter(s)**

Steps

- Temp **64 C**, Time **37 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **37 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **3.2 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|--------|-----|
| Grain | Viking Pale Ale malt | 1.95 kg (55.7%) | 80 % | 5 |
| Grain | Strzegom Pszeniczny | 0.65 kg (18.6%) | 73 % | 6 |
| Grain | Płatki owsiane | 0.5 kg (14.3%) | 85 % | 3 |
| Grain | Rice, Flaked | 0.25 kg (7.1%) | 70 % | 2 |
| Sugar | Milk Sugar (Lactose) | 0.15 kg (4.3%) | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|--------|------------|
| Boil | lunga PL | 10 g | 55 min | 9.6 % |
| Whirlpool | Zappa | 28.5 g | 1 min | 10 % |
| Whirlpool | Ahhroma | 28.5 g | 1 min | 10 % |
| Whirlpool | Trident | 20 g | 1 min | 13.9 % |
| Whirlpool | Idaho 7 | 18 g | 1 min | 13.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------|------|------|--------|------------|
| Lallemand - LalBrew Verdant IPA | Ale | Dry | 11 g | Lallemand |

Extras

| Type | Name | Amount | Use for | Time |
|-------|------------|--------|-----------|----------|
| Other | Witamina C | 1.02 g | Secondary | 7 day(s) |