

APA2020

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **40**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.7 liter(s) / kg**
- Mash size **32 liter(s)**
- Total mash volume **38.8 liter(s)**

Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **32 liter(s)** of strike water to **66.5C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **33.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Malteurop Pale Ale | 6 kg (88.2%) | 79 % | 6 |
| Grain | Pszeniczny | 0.5 kg (7.4%) | 85 % | 4 |
| Grain | Karmelowy Jasny 30EBC | 0.3 kg (4.4%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 30 g | 60 min | 15.5 % |
| Dry Hop | Cascade | 50 g | 2 day(s) | 6 % |
| Dry Hop | Simcoe | 60 g | 2 day(s) | 13.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|-------|--------|------------|
| OSLO | Ale | Slant | 200 ml | --- |