

APA

- Gravity **11.9 BLG**
- ABV ---
- IBU **34**
- SRM **6.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **65.5 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13.2 liter(s)** of strike water to **73.1C**
- Add grains
- Keep mash **60 min** at **65.5C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.9 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 3 kg (68.2%) | 79 % | 6 |
| Grain | Strzegom Pilzneński | 1.2 kg (27.3%) | 80 % | 4 |
| Grain | Strzegom Karmel 30 | 0.1 kg (2.3%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 0.1 kg (2.3%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Magnum | 22 g | 60 min | 10.6 % |
| Boil | Amarillo | 15 g | 15 min | 8.8 % |
| Whirlpool | Amarillo | 10 g | 0 min | 8.8 % |
| Whirlpool | Citra | 15 g | 0 min | 13.5 % |
| Whirlpool | Mosaic | 15 g | 0 min | 11.7 % |
| Dry Hop | Citra | 25 g | 4 day(s) | 13.5 % |
| Dry Hop | Mosaic | 25 g | 4 day(s) | 11.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--------------|-----|-----|------|-----------|
| Safale US-05 | Ale | Dry | 11 g | Fermentis |
|--------------|-----|-----|------|-----------|