

apa

- Gravity **12.2 BLG**
- ABV ---
- IBU **35**
- SRM **5.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **72C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Karmel 30 | 0.3 kg (6.1%) | 75 % | 30 |
| Grain | Strzegom Pilzneński | 4.3 kg (87.8%) | 80 % | 4 |
| Grain | Strzegom pszeniczny | 0.3 kg (6.1%) | 81 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Marynka | 30 g | 60 min | 10.5 % |
| Aroma (end of boil) | Cascade | 15 g | 0 min | 6.8 % |
| Aroma (end of boil) | Ahtanum | 15 g | 0 min | 3.2 % |
| Whirlpool | Mosaic | 15 g | 30 min | 11.7 % |
| Whirlpool | Cascade | 15 g | 30 min | 6.8 % |
| Dry Hop | Ahtanum | 20 g | 7 day(s) | 3.2 % |
| Dry Hop | Mosaic | 20 g | 7 day(s) | 11.7 % |
| Dry Hop | Cascade | 20 g | 7 day(s) | 6.8 % |
| Aroma (end of boil) | Mosaic | 15 g | 0 min | 11.7 % |
| Whirlpool | Ahtanum | 15 g | 30 min | 3.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-05 | Ale | Dry | 10 g | Safale |