

APA Cascade Hops

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **45**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale | 2.5 kg (50%) | 79 % | 6 |
| Grain | Słód monachijski | 1.25 kg (25%) | 79 % | 15 |
| Grain | Strzegom Pilzneński | 1.25 kg (25%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil | Marynka | 20 g | 25 min | 8.8 % |
| Boil | Cascade | 30 g | 25 min | 7.1 % |
| Boil | Cascade | 50 g | 10 min | 7.1 % |
| Dry Hop | Cascade | 20 g | 5 day(s) | 7.1 % |

Yeasts

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