

letnie APA

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **20**
- SRM **8.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.1 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.7 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------------|----------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 2.5 kg (46.7%) | 80 % | 6 |
| Grain | Strzegom Pilzneński | 1.5 kg (28%) | 80 % | 4 |
| Grain | Pszeniczny | 0.5 kg (9.3%) | 85 % | 4 |
| Grain | Cara Ruby Castle | 0.4 kg (7.5%) | 72 % | 49 |
| Grain | Karmelowy Jasny 30EBC | 0.2 kg (3.7%) | 75 % | 30 |
| Grain | Słód Caramunich Typ II Weyermann | 0.25 kg (4.7%) | 73 % | 120 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | lunga | 12 g | 60 min | 11 % |
| Boil | Marynka | 5 g | 60 min | 10 % |
| Aroma (end of boil) | monroe | 40 g | 1 min | 2.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |