

APA - warsztaty 13.09. Kraków

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **37**
- SRM **4.6**
- 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 **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **14.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Pilzneński | 3.5 kg (74.5%) | 81 % | 4 |
| Grain | Strzegom Monachijski typ I | 1 kg (21.3%) | 79 % | 16 |
| Grain | Pszeniczny | 0.2 kg (4.3%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil | Citra | 15 g | 60 min | 12.9 % |
| Boil | Citra | 10 g | 15 min | 12.9 % |
| Boil | Amarillo | 10 g | 15 min | 10.5 % |
| Aroma (end of boil) | Citra | 10 g | 2 min | 12.9 % |
| Aroma (end of boil) | Amarillo | 30 g | 2 min | 10.5 % |
| Dry Hop | Amarillo | 25 g | 1 day(s) | 10.5 % |
| Dry Hop | Citra | 30 g | 1 day(s) | 13.5 % |

Yeasts

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