

Fajrant

- Gravity **7.8 BLG**
- ABV **3 %**
- IBU **9**
- SRM **3**
- 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 **10.5 liter(s)**
- Total mash volume **13.5 liter(s)**

Steps

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

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **79.4C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 1.5 kg (50%) | 81 % | 4 |
| Grain | Żytni | 1 kg (33.3%) | 85 % | 8 |
| Grain | Pszeniczny | 0.5 kg (16.7%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Mosaic | 10 g | 10 min | 10 % |
| Boil | Amarillo | 10 g | 10 min | 9.5 % |
| Aroma (end of boil) | Mosaic | 15 g | 0 min | 10 % |
| Aroma (end of boil) | Amarillo | 15 g | 0 min | 9.5 % |
| Whirlpool | Mosaic | 20 g | 0 min | 10 % |
| Whirlpool | Amarillo | 20 g | 0 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | --- |