

Klon Miłośław bezalkoholowy

- Gravity **6.3 BLG**
- ABV **2.4 %**
- IBU **25**
- SRM **2.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **13.1 liter(s)**
- Total mash volume **15.7 liter(s)**

Steps

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

Mash step by step

- Heat up **13.1 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **72C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|--------|-----|
| Grain | Viking Pale Ale malt | 0.77 kg (29.4%) | 80 % | 5.5 |
| Grain | Viking Pilsner malt | 0.77 kg (29.4%) | 82 % | 4 |
| Grain | Viking Wheat Malt | 0.77 kg (29.4%) | 83 % | 5 |
| Grain | Rye, Flaked | 0.31 kg (11.8%) | 78.3 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|---------|----------|------------|
| Boil | Warrior | 3.83 g | 60 min | 14.7 % |
| Boil | Citra | 19.17 g | 10 min | 13.5 % |
| Boil | Amarillo | 19.17 g | 10 min | 8.7 % |
| Whirlpool | Citra | 19.17 g | 0 min | 13.5 % |
| Whirlpool | Amarillo | 19.17 g | 0 min | 8.7 % |
| Dry Hop | Citra | 38.33 g | 4 day(s) | 13.5 % |
| Dry Hop | Amarillo | 38.33 g | 4 day(s) | 8.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|------|------|--------|------------|
| Fermentis US-05 | Ale | Dry | 8.82 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------------------|---------|---------|--------|
| Fining | whirflock | 0.38 g | Boil | 15 min |
| Flavor | skórka suszonej bergamotki | 15.33 g | Boil | 15 min |