

# 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