

# Bezalkoholowe 1.0

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **36**
- SRM **5.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.28 liter(s) / kg**
- Mash size **8.5 liter(s)**
- Total mash volume **11.1 liter(s)**

## Steps

- Temp **69 C**, Time **90 min**

## Mash step by step

- Heat up **8.5 liter(s)** of strike water to **76.5C**
- Add grains
- Keep mash **90 min** at **69C**
- Sparge using **6.8 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.8 kg (69.2%)	80 %	5
Grain	Strzegom Wiedeński	0.5 kg (19.2%)	79 %	10
Grain	Weyermann - Carapils	0.1 kg (3.8%)	78 %	4
Grain	Viking melanoidynowy	0.1 kg (3.8%)	75 %	60
Grain	Pszeniczny	0.1 kg (3.8%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	5 g	30 min	13.1 %
Boil	Amarillo	5 g	30 min	8.8 %
Boil	Simcoe	5 g	10 min	13.2 %
Boil	Amarillo	5 g	10 min	9.5 %
Boil	Citra	5 g	5 min	13.5 %
Boil	Simcoe	5 g	5 min	13.1 %
Boil	Amarillo	5 g	5 min	8.8 %
Boil	Citra	5 g	0 min	13.5 %
Boil	Simcoe	5 g	0 min	13.1 %
Boil	Amarillo	5 g	0 min	8.8 %

Whirlpool	Citra	5 g	10 min	13.5 %
Whirlpool	Simcoe	5 g	10 min	13.1 %
Whirlpool	Amarillo	5 g	10 min	8.8 %
Dry Hop	Citra	5 g	5 day(s)	13.5 %
Dry Hop	Simcoe	5 g	5 day(s)	13.1 %
Dry Hop	Amarillo	5 g	5 day(s)	8.8 %
Dry Hop	Citra	5 g	3 day(s)	13.5 %
Dry Hop	Simcoe	5 g	3 day(s)	13.1 %
Dry Hop	Amarillo	5 g	3 day(s)	8.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	6 g	Fermentis