

# HANGOVERLESS

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **48**
- SRM **3.5**
- Style **Fruit Beer**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **68 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **26 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód pszeniczny Bestmalz	4 kg (61.5%)	82 %	5
Grain	Zakwaszający	2 kg (30.8%)	75 %	5
Sugar	Milk Sugar (Lactose)	0.5 kg (7.7%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	40 g	60 min	15.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	12.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	Owoce pulpa	500 g	Secondary	7 day(s)