

# Kwas

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **34**
- SRM **3.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

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

## Mash step by step

- Heat up **21 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (57.1%)	81 %	4
Grain	Pszeniczny	2.5 kg (35.7%)	85 %	4
Grain	Płatki żytnie	0.5 kg (7.1%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	20 g	30 min	8.3 %
Aroma (end of boil)	Citra	50 g	5 min	13.1 %
Aroma (end of boil)	Mosaic	50 g	5 min	12.6 %
Aroma (end of boil)	Cascade	30 g	5 min	6 %
Dry Hop	Mosaic	50 g	2 day(s)	12.6 %
Dry Hop	Citra	50 g	2 day(s)	13.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11 g	---
Lacto Plantarum	Ale	Culture	1 g	1/3 opakowania, 3 dni/ temp pokojowa