

# Odpadki

- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **12**
- SRM **8.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.2 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **25.5 liter(s)**
- Total mash volume **34 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **45 min**

## Mash step by step

- Heat up **25.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **45 min** at **78C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **26.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Munich Malt	3.5 kg (39.8%)	78 %	18
Grain	Viking Pilsner malt	5 kg (56.8%)	82 %	4
Adjunct	Rice Hulls	0.3 kg (3.4%)	1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Tomyski	100 g	15 min	2.8 %
Dry Hop	Tomyski	100 g	6 day(s)	2.8 %
Dry Hop	Oktawia	100 g	6 day(s)	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis