

# Narodowe

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **33**
- SRM **3.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **10 %**
- Size with trub loss **42 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **50.8 liter(s)**

## Mash information

- Mash efficiency **89 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29.1 liter(s)**
- Total mash volume **37.4 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**

## Mash step by step

- Heat up **29.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **30 liter(s)** of **76C** water or to achieve **50.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	7 kg (84.3%)	82 %	4
Grain	Viking Vienna Malt	1 kg (12%)	79 %	7
Grain	Słód pszeniczny Bestmalz	0.3 kg (3.6%)	82 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	30 g	60 min	11.2 %
Whirlpool	Lublin (Lubelski)	50 g	30 min	4 %
Whirlpool	Marynka	50 g	30 min	10 %
Dry Hop	Lublin (Lubelski)	50 g	5 day(s)	4 %
Dry Hop	Marynka	50 g	5 day(s)	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	50 ml	---