

# urodzinowe

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **16**
- SRM **3.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **10 liter(s)**

## Steps

- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **7.5 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (60%)	80 %	5
Grain	Płatki owsiane	0.5 kg (20%)	85 %	3
Grain	Pszeniczny	0.5 kg (20%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	lunga	15 g	15 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	150 ml	Fermentum Mobile