

# Kundel urodzinowy

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **16**
- SRM **4.3**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **8 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **88 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **68 C**, Time **666 min**

## Mash step by step

- Heat up **14 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **666 min** at **68C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (75%)	80 %	5
Grain	Viking Munich Malt	1 kg (25%)	78 %	18

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	50 min	10 %
Boil	Marynka	9 g	20 min	10 %
Whirlpool	Simcoe	10 g	0 min	13.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	5 min