

# Stout urodzinowy dla rodziców

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **32**
- SRM **35.5**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.3 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

## Steps

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

## Mash step by step

- Heat up **15 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **666 min** at **68C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (46.5%)	80 %	5
Grain	Płatki owsiane	1 kg (23.3%)	85 %	3
Grain	Fawcett - Pale Chocolate	0.5 kg (11.6%)	71 %	600
Grain	Strzegom Barwiący obłuszczony	0.3 kg (7%)	68 %	1300
Grain	Fawcett - Brown	0.2 kg (4.7%)	72 %	180
Grain	Viking caramel aromatic	0.3 kg (7%)	75 %	180

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	5 g	50 min	7 %
Boil	Marynka	5 g	50 min	8.4 %
Boil	Perle	15 g	20 min	7 %
Boil	Marynka	15 g	20 min	8.4 %
Boil	Perle	30 g	5 min	7 %
Boil	Marynka	30 g	5 min	8.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Danstar - Windsor Ale	Ale	Dry	11 g	Danstar
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### Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min