

# Urodzinowe

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **18**
- SRM **10.9**
- Style **Fruit Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.4 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.6 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (63.2%)	80 %	4
Grain	Karmelowy Czerwony	1 kg (21.1%)	75 %	59
Grain	Cara Gold Castlemalting	0.5 kg (10.5%)	78 %	120
Grain	Briess - 2 Row Carapils Malt	0.25 kg (5.3%)	75 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Blanc	15 g	60 min	11 %
Boil	Hallertau Blanc	10 g	0 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
w 34/70	Lager	Slant	500 ml	---

## Extras

Type	Name	Amount	Use for	Time
Herb	kwiat hibiskusa	100 g	Boil	5 min
Herb	płatki dzikiej róży	50 g	Boil	5 min
Herb	suszone czerwone owoce	50 g	Boil	5 min