

# Final & ICE Stargardzki Koziółek #1

- Gravity **16.6 BLG**
- ABV ---
- IBU **23**
- SRM **8**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **33.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **46.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **35.7 liter(s)**
- Total mash volume **47.6 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **35.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **22.4 liter(s)** of **76C** water or to achieve **46.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Munich Malt II	5.9 kg (49.6%)	78 %	---
Grain	Weyermann - Pilsner Malt	4.9 kg (41.2%)	81 %	5
Grain	Biscuit Malt	0.35 kg (2.9%)	79 %	45
Grain	Melanoiden Malt	0.5 kg (4.2%)	80 %	39
Grain	Caraaroma	0.25 kg (2.1%)	78 %	320

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	50 g	60 min	8.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
w34/70	Lager	Slant	385 ml	Fermentis