

## TO\_DO\_GrowJish\*19

- Gravity **7.6 BLG**
- ABV **2.9 %**
- IBU **27**
- SRM **3**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.7 liter(s)**
- Boil time **70 min**
- Evaporation rate **12 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **17.3 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **14.2 liter(s)** of strike water to **68.9C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **73C**
- Keep mash **2 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Grodziski	2 kg (63.5%)	80 %	4
Grain	Viking Malt Wędzony Czereśnią	0.65 kg (20.6%)	82 %	10
Grain	Strzegom Pilzneński	0.5 kg (15.9%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	25 g	60 min	4.5 %
Boil	Lomik	25 g	25 min	3.8 %
Boil	Lomik	25 g	10 min	3.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Safale

### Extras

Type	Name	Amount	Use for	Time
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Fining	Żelatyna	4 g	Secondary	2 day(s)
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