

## Grodzie 3 exp

- Gravity **12.1 BLG**
- ABV ---
- IBU **44**
- SRM **5.8**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **1 %**
- Size with trub loss **15.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **14.8 liter(s)**

### Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **11.5 liter(s)** of strike water to **71.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **18.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	3 kg (90.9%)	80 %	10
Grain	Strzegom Wiedeński	0.3 kg (9.1%)	79 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Super Galena	10 g	30 min	14.2 %
Boil	Super Galena	10 g	20 min	14.2 %
Aroma (end of boil)	Super Galena	10 g	10 min	14.2 %
Aroma (end of boil)	Citra	15 g	5 min	12 %
Whirlpool	Citra	15 g	0 min	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM51 Grodzie Dębowe	Wheat	Liquid	60 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Flavor	Sok	3000 g	Secondary	2 day(s)