

## #41 Grodziskie

- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **23**
- SRM **2.2**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **31.5 liter(s)**
- Total mash volume **38.5 liter(s)**

### Steps

- Temp **45 C**, Time **0 min**
- Temp **52 C**, Time **15 min**
- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **31.5 liter(s)** of strike water to **47.8C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **15 min** at **52C**
- Keep mash **40 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **38.8 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	7 kg (100%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	13.5 %
Boil	Magnum	5 g	30 min	13.5 %
Boil	Lomik	30 g	10 min	4.5 %
Boil	Lomik	20 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11.5 g	Fermentis
Safale K-97	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	4 g	Mash	90 min
Water Agent	xxx	5 g	Mash	90 min
Water Agent	Sól epsom	11 g	Mash	90 min
Fining	Whirfloc	4 g	Boil	15 min
Flavor	Śliwka wędzona	250 g	Boil	15 min
Flavor	Śliwka suszona	100 g	Boil	15 min
Fining	Żelatyna spożywcza	20 g	Secondary	3 day(s)