

## #105 Grodziskie

- Gravity **8.3 BLG**
- ABV **3.2 %**
- IBU **16**
- SRM **2.9**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **21.1 liter(s)**

### Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **14.5 liter(s)**
- Total mash volume **17.4 liter(s)**

### Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **14.5 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	2.5 kg (86.2%)	80 %	3
Grain	Viking Malt Wędzony Czereśnią	0.4 kg (13.8%)	82 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga PL	4 g	45 min	10 %
Boil	lunga PL	4 g	30 min	10 %
Aroma (end of boil)	lunga PL	15 g	6 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	100 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
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Fining	Whirlfloc	2.5 g	Boil	12 min
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