

## VIII warka Grodziskie

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- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **23**
- SRM **2.8**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **8.8 liter(s)**
- Total mash volume **11 liter(s)**

### Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **8.8 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	1 kg (45.5%)	80 %	3
Grain	Słód pszeniczny Bestmalz	0.7 kg (31.8%)	82 %	5
Grain	Strzegom Pilzneński	0.5 kg (22.7%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	15 g	20 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Wheat	Dry	11.5 g	Safbrew