

# Grodziskie Wariacje I

- Gravity **8.1 BLG**
- ABV ---
- IBU **34**
- SRM **3.2**
- Style **Grodziskie/Graetzer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **24.1 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.1 liter(s)**
- Total mash volume **10.8 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **70 C**, Time **30 min**
- Temp **75 C**, Time **1 min**

## Mash step by step

- Heat up **8.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **1 min** at **75C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Grodziski	1.4 kg (51.9%)	80 %	4
Grain	Weyermann - Smoked Malt	1 kg (37%)	81 %	6
Grain	Pilzneński	0.3 kg (11.1%)	81 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	17 g	60 min	11.8 %
Boil	Lublin (Lubelski)	15 g	20 min	4 %
Aroma (end of boil)	Tradition	15 g	1 min	4 %

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min