

# NIEMALŻE GRODZISKIE

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- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **14**
- SRM **2.7**
- Style **Grodziskie/Graetzer**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **32.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **38 C**, Time **30 min**
- Temp **52 C**, Time **45 min**
- Temp **63 C**, Time **20 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **15.2 liter(s)** of strike water to **40.3C**
- Add grains
- Keep mash **30 min** at **38C**
- Keep mash **45 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **20 min** at **70C**
- Keep mash **1 min** at **78C**
- Sparge using **20.9 liter(s)** of **76C** water or to achieve **32.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann® Oak Smoked Wheat Malt	2 kg (52.6%)	81 %	4
Grain	Viking Wheat Malt	0.9 kg (23.7%)	82 %	5
Grain	Viking Pilsner malt	0.9 kg (23.7%)	82 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	35 g	60 min	3.6 %
Aroma (end of boil)	Lublin (Lubelski)	10 g	10 min	3.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M42	Ale	Slant	100 ml	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
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Fining	Whirlfloc	0.125 g	Boil	10 min
Other	Łuska ryżowa	200 g	Mash	20 min