

# Grażka

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- Gravity **8 BLG**
- ABV ---
- IBU **21**
- SRM **4.5**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

## Steps

- Temp **52 C**, Time **5 min**
- Temp **70 C**, Time **45 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **9 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **45 min** at **70C**
- Keep mash **15 min** at **78C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pszeniczny wędzony bukiem	2 kg (66.7%)	75 %	5
Grain	Strzegom Pszeniczny	0.8 kg (26.7%)	81 %	6
Grain	karmelowy jasny strzegom	0.2 kg (6.7%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Lomik	20 g	60 min	3.8 %
Boil	Magnat	10 g	60 min	11.2 %
Boil	Lomik	10 g	10 min	3.8 %
Boil	Lomik	10 g	1 min	3.8 %
Boil	Lomik	10 g	20 min	3.8 %