

# Grodziskie #\_b\_ro Cascade PL

- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **24**
- SRM **2.4**
- 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 **75 min**
- Evaporation rate **10 %/h**
- Boil size **32.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **16.7 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **66 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **13 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **25 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **23.1 liter(s)** of **76C** water or to achieve **32.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	1 kg (27%)	80 %	3
Grain	Grodziski pszeniczny wędzony dębem	1 kg (27%)	80 %	3
Grain	Pilzneński	1.7 kg (45.9%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade PL	25 g	60 min	5.2 %
Boil	Cascade PL	20 g	30 min	5.2 %
Aroma (end of boil)	Cascade PL	20 g	5 min	5.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Fining	karuk	8 g	Boil	10 min