

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 |
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| 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 |