

hoppy Grodziskie

- Gravity **8.5 BLG**
- ABV **3.3 %**
- IBU **27**
- SRM **2.8**
- Style **Grodziskie**

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 **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Weyermann - Grodziski | 3.4 kg (100%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|--------|------------|
| Whirlpool | Mosaic | 5 g | 20 min | 11.4 % |
| Whirlpool | Cascade | 5 g | 20 min | 6 % |
| Whirlpool | Centennial | 5 g | 20 min | 10.5 % |
| Whirlpool | Simcoe | 5 g | 20 min | 13.2 % |
| Whirlpool | Columbus/Tomahawk/Zeus | 5 g | 20 min | 15.5 % |
| Boil | Centennial | 5 g | 30 min | 10.5 % |
| Boil | Cascade | 5 g | 30 min | 6 % |
| Boil | Simcoe | 5 g | 60 min | 13.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 11 g | Safbrew |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------|---------|---------|----------|
| Fining | karuk | 99999 g | Primary | 5 day(s) |