

# GroNeo

- Gravity **8.3 BLG**
- ABV **3.2 %**
- IBU **12**
- SRM **2.4**
- Style **Grodziskie**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **55 C**, Time **25 min**
- Temp **69 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **25 min** at **55C**
- Keep mash **45 min** at **69C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **39.6 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

## Fermentables

| Type  | Name                               | Amount        | Yield | EBC |
|-------|------------------------------------|---------------|-------|-----|
| Grain | Pszeniczny                         | 5 kg (90.9%)  | 95 %  | 4   |
| Grain | Grodziski pszeniczny wędzony dębem | 0.5 kg (9.1%) | 80 %  | 3   |

## Hops

| Use for   | Name     | Amount | Time     | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil      | Talus    | 10 g   | 55 min   | 6.7 %      |
| Boil      | Książęcy | 20 g   | 55 min   | 6.5 %      |
| Whirlpool | Talus    | 20 g   | 0 min    | 6.7 %      |
| Whirlpool | Książęcy | 60 g   | 0 min    | 6.5 %      |
| Dry Hop   | Talus    | 30 g   | 2 day(s) | 6.7 %      |
| Dry Hop   | Książęcy | 100 g  | 2 day(s) | 6.5 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale K-97 | Ale  | Dry  | 23 g   | Fermentis  |