

żytnie Grodzie

- Gravity **7.9 BLG**
- ABV ---
- IBU **32**
- SRM **5**
- Style **Grodziskie/Graetzer**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **1 %**
- Size with trub loss **22.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **7.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **23.8 liter(s)**

Steps

- Temp **46 C**, Time **10 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **10 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **47.7C**
- Add grains
- Keep mash **10 min** at **46C**
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **10 min** at **73C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **29.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Weyermann - Grodziski | 2 kg (71.4%) | 80 % | 4 |
| Grain | Strzegom Pilzneński | 0.7 kg (25%) | 80 % | 4 |
| Grain | Karmelowy żytni Strzegom | 0.1 kg (3.6%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 10 g | 60 min | 10 % |
| Boil | Marynka | 15 g | 30 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 5 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------|-------|--------|--------|------------------|
| FM51 Grodzie Dębowe | Wheat | Liquid | 20 ml | Fermentum Mobile |