

Grodziskie Wariacje IV USA

- Gravity **7.8 BLG**
- ABV ---
- IBU **48**
- SRM **2.8**
- Style **Grodziskie/Graetzer**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **70 C**, Time **40 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **8.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **40 min** at **70C**
- Keep mash **1 min** at **77C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Weyermann - Grodziski | 2 kg (69%) | 80 % | 4 |
| Grain | Dymiony IREKS | 0.6 kg (20.7%) | 78 % | 5 |
| Grain | Pilzneński | 0.3 kg (10.3%) | 81 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| First Wort | Marynka | 10 g | 60 min | 10 % |
| Boil | Simcoe | 10 g | 60 min | 13.2 % |
| Boil | Amarillo | 10 g | 15 min | 8.8 % |
| Boil | Citra | 10 g | 15 min | 11 % |
| Aroma (end of boil) | Mosaic | 10 g | 15 min | 11.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safbrew S-33 | Ale | Slant | 200 ml | Safbrew |

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------------|--------|---------|--------|
| Other | Łuska Ryżowa | 150 g | Mash | 60 min |