

## # 64 grodzisz na medal

- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **29**
- SRM **2.7**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **27.5 liter(s)**

### Steps

- Temp **38 C**, Time **30 min**
- Temp **52 C**, Time **45 min**
- Temp **63 C**, Time **20 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **40C**
- Add grains
- Keep mash **30 min** at **38C**
- Keep mash **45 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **20 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

### Fermentables

| Type  | Name                               | Amount     | Yield | EBC |
|-------|------------------------------------|------------|-------|-----|
| Grain | Grodziski pszeniczny wędzony dębem | 4 kg (80%) | 80 %  | 3   |
| Grain | Strzegom Pilzneński                | 1 kg (20%) | 80 %  | 4   |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| First Wort          | Lublin (Lubelski) | 20 g   | 60 min | 4.3 %      |
| Boil                | Lublin (Lubelski) | 30 g   | 60 min | 4.3 %      |
| Aroma (end of boil) | Tomyski           | 30 g   | 10 min | 4.9 %      |
| Aroma (end of boil) | Tomyski           | 35 g   | 5 min  | 4.9 %      |
| Aroma (end of boil) | Tomyski           | 35 g   | 0 min  | 4.9 %      |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

## Notes

- wysycenie 8g/l  
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*May 1, 2024, 12:28 AM*