

## #105 Grodziskie

- Gravity **8.3 BLG**
- ABV **3.2 %**
- IBU **16**
- SRM **2.9**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **21.1 liter(s)**

### Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **14.5 liter(s)**
- Total mash volume **17.4 liter(s)**

### Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **14.5 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

### Fermentables

| Type  | Name                               | Amount         | Yield | EBC |
|-------|------------------------------------|----------------|-------|-----|
| Grain | Grodziski pszeniczny wędzony dębem | 2.5 kg (86.2%) | 80 %  | 3   |
| Grain | Viking Malt Wędzony Czereśnią      | 0.4 kg (13.8%) | 82 %  | 10  |

### Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | lunga PL | 4 g    | 45 min | 10 %       |
| Boil                | lunga PL | 4 g    | 30 min | 10 %       |
| Aroma (end of boil) | lunga PL | 15 g   | 6 min  | 10 %       |

### Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 100 ml | Fermentum Mobile |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|        |           |       |      |        |
|--------|-----------|-------|------|--------|
| Fining | Whirlfloc | 2.5 g | Boil | 12 min |
|--------|-----------|-------|------|--------|