

# Grodzie Ciemne

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- Gravity **11.2 BLG**
- ABV ---
- IBU **28**
- SRM **39.5**
- Style **Grodziskie/Graetzer**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **2 %**
- Size with trub loss **16.3 liter(s)**
- Boil time **75 min**
- Evaporation rate **25 %/h**
- Boil size **23.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **13.5 liter(s)**

## Steps

- Temp **32 C**, Time **45 min**
- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **33.7C**
- Add grains
- Keep mash **45 min** at **32C**
- Keep mash **60 min** at **63C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield  | EBC  |
|-------|---------------------------|----------------|--------|------|
| Grain | Weyermann - Grodziski     | 1.2 kg (40%)   | 80 %   | 4    |
| Grain | Strzegom Wiedeński        | 0.5 kg (16.7%) | 79 %   | 10   |
| Grain | Briess - Smoked Malt      | 0.7 kg (23.3%) | 80.5 % | 10   |
| Grain | Strzegom Czekoladowy 1200 | 0.1 kg (3.3%)  | 68 %   | 1202 |
| Grain | Jęczmień palony           | 0.1 kg (3.3%)  | 55 %   | 985  |
| Grain | Strzegom Barwiący         | 0.1 kg (3.3%)  | 68 %   | 1300 |
| Grain | Strzegom Karmel 150       | 0.1 kg (3.3%)  | 75 %   | 150  |
| Grain | Oats, Flaked              | 0.2 kg (6.7%)  | 80 %   | 2    |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 15 g   | 30 min | 10 %       |
| Boil    | Marynka | 15 g   | 10 min | 10 %       |

## Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| US-05       | Ale         | Slant       | 300 ml        | fermentis         |