

Porter gryczany

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **32**
- SRM **30.9**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 1.5 kg (28%) | 80 % | 5 |
| Grain | Strzegom Monachijski typ I | 1 kg (18.7%) | 79 % | 16 |
| Grain | Viking melanoidynowy | 0.25 kg (4.7%) | 75 % | 60 |
| Grain | Słód Gryczany | 1.5 kg (28%) | 68 % | 9.5 |
| Grain | Strzegom Karmel 300 | 0.25 kg (4.7%) | 70 % | 299 |
| Grain | Strzegom Czekoladowy jasny | 0.25 kg (4.7%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.25 kg (4.7%) | 68 % | 1200 |
| Grain | Karmelowy żytni Strzegom | 0.25 kg (4.7%) | 75 % | 150 |
| Grain | Jęczmień palony | 0.1 kg (1.9%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Target | 20 g | 60 min | 10.5 % |
| Aroma (end of boil) | East Kent Goldings | 50 g | 10 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|--------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Liquid | 20 ml | Fermentum Mobile |