

## 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