

FES

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **35**
- SRM **34.1**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **46 liter(s)**
- Trub loss **5 %**
- Size with trub loss **48.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **58.2 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **40.5 liter(s)**
- Total mash volume **54 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	5 kg (37%)	80 %	8
Grain	Strzegom Pale Ale	5 kg (37%)	79 %	6
Grain	Strzegom Karmel 300	0.5 kg (3.7%)	70 %	299
Grain	Caraaroma	0.5 kg (3.7%)	78 %	400
Grain	Weyermann - Carawheat	1 kg (7.4%)	77 %	97
Grain	Strzegom Czekoladowy 400	0.5 kg (3.7%)	68 %	400
Grain	Czekoladowy	0.5 kg (3.7%)	60 %	788
Grain	Jęczmień palony	0.5 kg (3.7%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	100 g	30 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	25 ml	Fermentum Mobile