

Black Express

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **33**
- SRM **37.6**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **7 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.2 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (62.5%)	80 %	5
Grain	Strzegom Monachijski typ II	0.5 kg (8.9%)	79 %	22
Grain	Fawcett - Pszeniczny Czekoladowy	0.4 kg (7.1%)	73 %	1001
Grain	Castle Cafe	0.4 kg (7.1%)	75.5 %	250
Grain	Carafa III	0.2 kg (3.6%)	70 %	1034
Grain	Jęczmień palony	0.15 kg (2.7%)	55 %	985
Grain	Płatki owsiane	0.4 kg (7.1%)	60 %	3
Sugar	cukier	0.05 kg (0.9%)	100 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	45 min	13.5 %
Aroma (end of boil)	Lublin (Lubelski)	25 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Flavor	Espresso	250 g	Bottling	---