

FES

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **31**
- SRM **27.4**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.2 liter(s)**
- Total mash volume **29.6 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6 kg (81.1%)	80 %	5
Grain	Jęczmień palony	0.2 kg (2.7%)	55 %	985
Grain	Caraaroma	0.3 kg (4.1%)	78 %	400
Grain	Jęczmień niesłodowany	0.4 kg (5.4%)	75 %	2
Grain	Weyermann - Carafa I	0.2 kg (2.7%)	70 %	690
Grain	Cookie	0.3 kg (4.1%)	72 %	50

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	50 min	10 %
Boil	Lublin (Lubelski)	40 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	1 ml	White Labs