

american FES?

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **38**
- SRM **33.6**
- Style **American Stout**

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 **22 liter(s)**
- Total mash volume **29.4 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (40.8%)	80 %	5
Grain	Strzegom Pilzneński	3 kg (40.8%)	80 %	4
Grain	Biscuit Malt	0.5 kg (6.8%)	79 %	45
Grain	Strzegom Czekoladowy jasny	0.3 kg (4.1%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.4%)	68 %	1200
Grain	Carafa II	0.1 kg (1.4%)	70 %	812
Grain	Jęczmień palony	0.2 kg (2.7%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	23 g	60 min	9.8 %
Boil	Chinook	13 g	60 min	10.5 %
Boil	Strata	10 g	5 min	13.6 %
Boil	Centennial	10 g	5 min	8.7 %
Boil	Cashmere	10 g	5 min	7 %
Boil	Ahtanum	10 g	5 min	5 %
Boil	Lemon drop	5 g	5 min	4.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Slant	200 ml	---