

FES #2

- Gravity **16.2 BLG**
- ABV **6.6 %**
- IBU **57.6**
- SRM **40**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **0 %**
- Size with trub loss **14 liter(s)**
- Boil time **45 min**
- Evaporation rate **10 %/h**
- Boil size **16.13 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **11.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **16.13 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (Weyermann)	1.5 kg	82.23 %	7
Grain	Viking Munich Malt Dark	1.35 kg	78 %	57
Grain	Caramel/Crystal Malt - 80L	0.35 kg	74 %	419
Grain	Viking Wheat Malt	0.35 kg	84 %	15
Grain	Viking Caramel 600	0.15 kg	68 %	1600
Grain	Carafa II (Weyermann)	0.1 kg	77.9 %	2180
Grain	Chocolate Wheat (Weyermann)	0.1 kg	75.74 %	2180

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pekko	23 g	45 min	17.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
SafAle English Ale	Ale	Dry	--- g	DCL/Fermentis