

FEST

- Gravity **18.7 BLG**
- ABV **8.1 %**
- IBU **52**
- SRM **51.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **75 min**
- Evaporation rate **15 %/h**
- Boil size **14.3 liter(s)**

Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **11.3 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **1 min** at **78C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **14.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.35 kg (30%)	81 %	4
Grain	Cookies viking	1.35 kg (30%)	79 %	70
Grain	Cara Gold Castlemalting	0.225 kg (5%)	78 %	120
Grain	Fawcett - Chocolate	0.225 kg (5%)	71 %	1150
Grain	Fawcett - Pale Chocolate	0.45 kg (10%)	71 %	600
Grain	Oats, Flaked	0.45 kg (10%)	80 %	2
Grain	Enzymatyczny	0.45 kg (10%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	60 min	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Omega Kölsch II	Ale	Slant	120 ml	Omega