Viking FES

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **35**
- SRM **29.4**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **26.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg *(78.1%)*	79 %	6
Grain	Strzegom Monachijski typ I	0.5 kg *(7.8%)*	79 %	12
Grain	Strzegom Czekoladowy ciemny	0.25 kg *(3.9%)*	68 %	1200
Grain	Jęczmień palony	0.25 kg *(3.9%)*	55 %	985
Grain	płatki jęczmienne	0.4 kg *(6.3%)*	60 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	25 g	55 min	12.9 %
Boil	Sybilla	20 g	10 min	6.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	---

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.