

Weselny FES

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **39**
- SRM **36.6**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **70 C**, Time **5 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **70C**
- Keep mash **1 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (72.7%)	82 %	4
Grain	Słód karmelowy Viking Malt	0.25 kg (4.5%)	75 %	600
Grain	Carafa Special Typ 2	0.25 kg (4.5%)	70 %	1100
Grain	Jęczmień palony	0.25 kg (4.5%)	55 %	1000
Grain	Płatki jęczmienne	0.75 kg (13.6%)	70 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	8.8 %
Boil	Marynka	20 g	10 min	8.8 %
Aroma (end of boil)	Willamette	50 g	1 min	5 %

Yeasts

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