

# FEST/OUT

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- Gravity **18.9 BLG**
- ABV ---
- IBU **36**
- SRM **60.5**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

## Steps

- Temp **66 C**, Time **0 min**
- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**
- Temp **100 C**, Time **65 min**

## Mash step by step

- Heat up **13.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **0 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Keep mash **65 min** at **100C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (54.3%)	80 %	---
Grain	Abbey Castle	0.25 kg (5.4%)	80 %	---
Grain	Słód barwiący Optima 1500	0.23 kg (5%)	--- %	1500
Grain	Słód karmelowy Optima 750	0.2 kg (4.3%)	--- %	750
Grain	Płatki owsiane	0.125 kg (2.7%)	85 %	3
Grain	Słód barwiący Optima 450	0.37 kg (8%)	--- %	450
Grain	Słód barwiący pszeniczny Optima 1500	0.2 kg (4.3%)	--- %	1500
Grain	Słód monachijski Optima	0.4 kg (8.7%)	--- %	7
Grain	Płatki jęczmienne	0.125 kg (2.7%)	--- %	---
Grain	Biscuit Malt	0.2 kg (4.3%)	79 %	---

## Hops

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

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	18.57 g	60 min	10 %
Boil	Chinooke	24.76 g	5 min	13 %
Aroma (end of boil)	Chinook	9.19 g	0 min	13 %
Dry Hop	Chinook	15 g	7 day(s)	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis US-05	Ale	Dry	6 g	---
Gęstwa śmierci po niezadbany wheatcie	Ale	Slant	100 ml	---