

# fes

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **32**
- SRM **23**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.6 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **13.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.4 liter(s) / kg**
- Mash size **7.2 liter(s)**
- Total mash volume **10.2 liter(s)**

## Steps

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

## Mash step by step

- Heat up **7.2 liter(s)** of strike water to **73.2C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **13.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (83.3%)	80 %	4
Grain	Caraaroma	0.15 kg (5%)	78 %	400
Grain	Jęczmień palony	0.1 kg (3.3%)	55 %	985
Grain	Weyermann - Carafa I	0.05 kg (1.7%)	70 %	690
Grain	Płatki owsiane	0.2 kg (6.7%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	22.5 g	55 min	5.1 %
Boil	Fuggles	22.5 g	10 min	6.1 %

## Notes

- Słody ciemne wsypane w 72 stopniach. Zamiast 2,5 kg pilz jest 2kg pilz + 0,5 wędzonego whisky.  
*Feb 18, 2018, 1:42 PM*