

## #32 Rye Peated FES

- Gravity **21.6 BLG**
- ABV **9.7 %**
- IBU **40**
- SRM **42.7**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **101.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **90 liter(s)**
- Total mash volume **126 liter(s)**

### Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **90 liter(s)** of strike water to **70.4C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **47.2 liter(s)** of **76C** water or to achieve **101.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Casle Malting Whisky Nature	10 kg (27.8%)	85 %	4
Grain	Weyermann - Rye Malt	10 kg (27.8%)	85 %	7
Grain	Weyermann - Pale Ale Malt	7 kg (19.4%)	85 %	7
Grain	Weyermann - Chocolate Rye	2 kg (5.6%)	20 %	493
Grain	Płatki jęczmienne	4 kg (11.1%)	80 %	4
Grain	Strzegom Czekoladowy jasny	1 kg (2.8%)	68 %	400
Grain	Jęczmień palony	1 kg (2.8%)	55 %	1150
Grain	Carafa II	1 kg (2.8%)	70 %	1150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	120 g	60 min	5.5 %
Boil	Fuggles	180 g	45 min	5.2 %
Boil	East Kent Goldings	120 g	30 min	5.5 %

Aroma (end of boil)	East Kent Goldings	90 g	3 min	5.5 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	77 g	Danstar