

FES XX22

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **47**
- SRM **38.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **29.3 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **21.6 liter(s)** of strike water to **76.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|----------------|-------|------|
| Grain | Simpsons - Golden Promise | 5 kg (64.9%) | 81 % | 4 |
| Grain | Weyermann - Pilsner Malt | 0.5 kg (6.5%) | 81 % | 5 |
| Grain | Weyermann pszeniczny jasny | 0.6 kg (7.8%) | 80 % | 6 |
| Grain | Weyermann jęczmień palony | 0.26 kg (3.4%) | 55 % | 1400 |
| Grain | Płatki owsiane błyskawiczne | 0.3 kg (3.9%) | 60 % | 3 |
| Grain | Płatki jęczmienne | 0.2 kg (2.6%) | 50 % | 3 |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (2.6%) | 68 % | 400 |
| Grain | Strzegom Karmel 600 | 0.1 kg (1.3%) | 68 % | 601 |
| Grain | Strzegom Karmel 300 | 0.1 kg (1.3%) | 70 % | 299 |
| Grain | Castle Malting - Coffee Malt | 0.25 kg (3.2%) | 74 % | 500 |
| Grain | Simpsons - Black Malt | 0.2 kg (2.6%) | 70 % | 1084 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 50 g | 60 min | 6.3 % |
| Boil | Marynka | 30 g | 60 min | 8.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--|------|------|--------|-----------------|
| Mangrove Jack's M42 New World Strong Ale | Ale | Dry | 10 g | Mangrove Jack's |