

Fes xd

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **30**
- SRM **40.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.7 liter(s)**
- Total mash volume **31.6 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **23.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|------|
| Grain | Pilzneński | 1.7 kg (21.5%) | 81 % | 4 |
| Grain | Carafa | 0.2 kg (2.5%) | 70 % | 664 |
| Grain | Jęczmień palony | 0.2 kg (2.5%) | 55 % | 985 |
| Grain | Caraaroma | 0.2 kg (2.5%) | 78 % | 400 |
| Grain | Carafa III | 0.2 kg (2.5%) | 70 % | 1034 |
| Grain | Briess - Pale Ale Malt | 1.5 kg (19%) | 80 % | 7 |
| Grain | Carafa II | 0.6 kg (7.6%) | 70 % | 812 |
| Grain | Płatki owsiane | 0.5 kg (6.3%) | 85 % | 3 |
| Grain | Pszeniczny | 2.8 kg (35.4%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 40 g | 50 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US 04 | Ale | Dry | 10 g | FERM |