

first stout

- Gravity **13.6 BLG**
- ABV ---
- IBU **26**
- SRM **30.4**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **19.6 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------|---------------|-------|-----|
| Grain | Pilzneński | 5 kg (89.3%) | 81 % | 4 |
| Grain | Caraaroma | 0.3 kg (5.4%) | 78 % | 400 |
| Grain | Carafa | 0.1 kg (1.8%) | 70 % | 664 |
| Grain | Jęczmień palony | 0.2 kg (3.6%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Marynka | 20 g | 60 min | 10 % |
| Boil | Lublin (Lubelski) | 30 g | 20 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|--------------------------------|--------|---------|--------|
| Flavor | płatki jęczmienne błyskawiczne | 1000 g | Mash | 60 min |