

Smoked FES #15

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **43**
- SRM **42.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **13.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.1 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **4.9 liter(s)** of **76C** water or to achieve **13.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Wędzony bukiem Viking Malt | 2 kg (55.8%) | 82 % | 10 |
| Grain | Viking Pale Ale malt | 1 kg (27.9%) | 80 % | 5 |
| Grain | Czekoladowy | 0.3 kg (8.4%) | 60 % | 788 |
| Grain | Jęczmień palony | 0.2 kg (5.6%) | 55 % | 985 |
| Grain | Płatki owsiane | 0.085 kg (2.4%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 9.2 % |
| Aroma (end of boil) | lunga | 10 g | 15 min | 9.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|-------|--------|------------|
| us05 | Ale | Slant | 200 ml | --- |