

Burnt FES

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **31**
- SRM **100.4**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **9.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **11.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.2 liter(s)**
- Total mash volume **9.6 liter(s)**

Steps

- Temp **63 C**, Time **60 min**

Mash step by step

- Heat up **7.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Sparge using **6.5 liter(s)** of **76C** water or to achieve **11.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński | 0.32 kg (12.3%) | 80 % | 4 |
| Grain | Melanoiden Malt | 0.3 kg (11.5%) | 80 % | 40 |
| Grain | Jęczmień palony | 0.3 kg (11.5%) | 55 % | 985 |
| Grain | Strzegom Czekoladowy 1200 | 0.3 kg (11.5%) | 68 % | 1200 |
| Grain | Extra black | 0.6 kg (23.1%) | 65 % | 1400 |
| Grain | Monachijski | 0.58 kg (22.3%) | 80 % | 16 |
| Sugar | XYLITOL | 0.2 kg (7.7%) | 75 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil | Magnum | 10 g | 60 min | 13.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|-------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 100 ml | Fermentum Mobile |