

fes

- Gravity **18.4 BLG**
- ABV ---
- IBU **67**
- SRM **40**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **5 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **68C**
- Keep mash **5 min** at **72C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 4 kg (64%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 1 kg (16%) | 79 % | 16 |
| Grain | Strzegom Czekoladowy 400 | 0.4 kg (6.4%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy 1200 | 0.3 kg (4.8%) | 68 % | 1202 |
| Grain | Jęczmień palony | 0.2 kg (3.2%) | 55 % | 985 |
| Grain | płatki jaglane | 0.35 kg (5.6%) | 70 % | 3.5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | lunga | 55 g | 60 min | 11 % |
| Boil | Lublin (Lubelski) | 20 g | 10 min | 4 % |
| Boil | lunga | 25 g | 5 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------------|-----|-------|--------|--------|
| Safale S-04 | Ale | Slant | 200 ml | Safale |
|-------------|-----|-------|--------|--------|