

Stout

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **39**
- SRM **36.7**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **3 %**
- Size with trub loss **26 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.4 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

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

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **31.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 3.5 kg (63.6%) | 80 % | 4 |
| Grain | Strzegom Czekoladowy ciemny | 0.25 kg (4.5%) | 68 % | 1200 |
| Grain | Strzegom pszenica prażona | 0.25 kg (4.5%) | 70 % | 1393 |
| Grain | Optima Karmel 150 | 1 kg (18.2%) | 75 % | 150 |
| Grain | Strzegom Karmel 300 | 0.5 kg (9.1%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Marynka | 40 g | 60 min | 8.8 % |
| Aroma (end of boil) | Marynka | 40 g | 5 min | 8.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|-------|--------|------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 200 ml | --- |