

Black Elf

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **39.3**
- Style **Dry 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 **24.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.1 liter(s)**

Steps

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

Mash step by step

- Heat up **16.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Wiedeński | 3.5 kg (74.5%) | 79 % | 10 |
| Grain | Strzegom Czekoladowy jasny | 0.5 kg (10.6%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (10.6%) | 68 % | 1200 |
| Grain | Viking Wędzony czereśnią | 0.2 kg (4.3%) | 82 % | 10 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 20 g | 60 min | 15.5 % |
| Aroma (end of boil) | Oktawia | 25 g | 0 min | 7.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11 g | --- |