

Doppelbock

- Gravity **21.8 BLG**
- ABV **9.8 %**
- IBU **27**
- SRM **19.7**
- Style **Doppelbock**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.6 liter(s)**
- Total mash volume **36.8 liter(s)**

Steps

- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **50 min**

Mash step by step

- Heat up **27.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **50 min** at **72C**
- Sparge using **6.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 3.5 kg (38%) | 79 % | 16 |
| Grain | Strzegom Wiedeński | 2.5 kg (27.2%) | 79 % | 10 |
| Grain | Viking melanoidynowy | 2 kg (21.7%) | 75 % | 60 |
| Grain | Strzegom Monachijski typ II | 1 kg (10.9%) | 79 % | 22 |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (2.2%) | 68 % | 400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil | Spalt | 40 g | 60 min | 5.5 % |
| Boil | Spalt | 30 g | 30 min | 5.5 % |
| Aroma (end of boil) | Spalt | 30 g | 0 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|-------|-------|--------|------------------|
| FM31 Bawarska Dolina | Lager | Slant | 300 ml | Fermentum Mobile |