

Doppelbock

- Gravity **20.2 BLG**
- ABV **8.9 %**
- IBU **23**
- SRM **8.7**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **36.4 liter(s)**

Steps

- Temp **50 C**, Time **1 min**
- Temp **62 C**, Time **30 min**
- Temp **100 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **27.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **1 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **20 min** at **100C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|----------------|-------|-----|
| Grain | Pilzneński | 4.5 kg (49.5%) | 81 % | 4 |
| Grain | Strzegom Wiedeński | 2 kg (22%) | 79 % | 10 |
| Grain | Monachijski | 2.3 kg (25.3%) | 80 % | 16 |
| Grain | Caraamber | 0.3 kg (3.3%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil | Marynka | 25 g | 60 min | 10 % |
| Boil | Hersbrucker | 30 g | 20 min | 3 % |