

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **28**
- SRM **19.8**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **33.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **22.7 liter(s)**
- Total mash volume **33 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **22.7 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 4 kg (38.8%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 3 kg (29.1%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ I | 2.5 kg (24.3%) | 79 % | 16 |
| Grain | Strzegom Karmel 30 | 0.6 kg (5.8%) | 75 % | 30 |
| Grain | Black Castle Malting | 0.2 kg (1.9%) | 65 % | 1400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Magnat | 35 g | 60 min | 11.2 % |
| Boil | Lublin (Lubelski) | 25 g | 10 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry | 23 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|----------------|-----|------|--------|
| Fining | mech irlandzki | 7 g | Boil | 15 min |
|--------|----------------|-----|------|--------|