

alt

- Gravity **11.8 BLG**
- ABV ---
- IBU **38**
- SRM **18.2**
- Style **Northern German Altbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **21.5 liter(s)**

Steps

- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **17.2 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **30 min** at **66C**
- Keep mash **30 min** at **72C**
- Sparge using **12.4 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 | 4 kg (93%) | 79 % | 16 |
| Grain | Strzegom Karmel 150 | 0.25 kg (5.8%) | 75 % | 150 |
| Grain | Strzegom Barwiący | 0.05 kg (1.2%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | lunga | 15 g | 60 min | 10 % |
| Boil | Tradition | 30 g | 30 min | 5.5 % |
| Boil | Tradition | 15 g | 15 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safbrew S-33 | Ale | Dry | 10 g | Safbrew |