

ALTBIER

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **7**
- SRM **11.3**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**
- Temp **79 C**, Time **1 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **1 min** at **79C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 4.6 kg (95.8%) | 79 % | 16 |
| Grain | Strzegom Karmel 300 | 0.2 kg (4.2%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil | Hersbrucker | 20 g | 55 min | 2.3 % |
| Boil | Hersbrucker | 10 g | 25 min | 2.3 % |
| Boil | Hersbrucker | 10 g | 5 min | 2.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |