

Altbier

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **27**
- SRM **10.7**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 1.5 kg (50%) | 79 % | 16 |
| Grain | Strzegom Wiedeński | 1 kg (33.3%) | 79 % | 10 |
| Grain | Abbey Malt Weyermann | 0.4 kg (13.3%) | 75 % | 45 |
| Grain | Weyermann Caramunich 3 | 0.1 kg (3.3%) | 76 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Tradition | 15 g | 60 min | 5.5 % |
| Boil | Tradition | 20 g | 10 min | 5.5 % |
| Boil | Tradition | 15 g | 5 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Fermentis |