

Altbier

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **45**
- SRM **13.7**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **2.5 %**
- Size with trub loss **10.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **12.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **9.6 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **7.5 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **12.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Weyermann - Pilsner Malt | 1.25 kg (58.4%) | 81 % | 5 |
| Grain | Strzegom Monachijski typ I | 0.75 kg (35%) | 79 % | 16 |
| Grain | Caraaroma | 0.115 kg (5.4%) | 78 % | 400 |
| Grain | Weyermann - Carafa I | 0.025 kg (1.2%) | 70 % | 690 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil | lunga | 18 g | 60 min | 9.5 % |
| Boil | Saaz (Czech Republic) | 10 g | 15 min | 3.5 % |
| Aroma (end of boil) | Saaz (Czech Republic) | 10 g | 0 min | 3.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale | Liquid | 30 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 3 g | Boil | 15 min |