

Altbier

- Gravity **12.6 BLG**
- ABV ---
- IBU **51**
- SRM **11.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **70 min**
- Evaporation rate **20 %/h**
- Boil size **16 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.4 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **9.4 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **16 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński | 1.5 kg (56.1%) | 80 % | 4 |
| Grain | Monachijski | 1 kg (37.4%) | 80 % | 16 |
| Grain | Crystal 150 | 0.15 kg (5.6%) | 75 % | 150 |
| Grain | Carafa III | 0.025 kg (0.9%) | 70 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 11 % |
| Boil | Hallertau | 20 g | 15 min | 4.5 % |
| Aroma (end of boil) | Hallertau | 20 g | 0 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-33 | Ale | Slant | 60 ml | Fermentis |

Extras

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

| | | | | |
|--------|----------------|-----|------|--------|
| Fining | Mech irlandzki | 4 g | Boil | 15 min |
|--------|----------------|-----|------|--------|