

# Altbier

---

- Gravity **12.7 BLG**
- ABV ---
- IBU **53**
- SRM **12.9**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **24.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **26.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.9 liter(s)**
- Total mash volume **19.5 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **13.9 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **23.3 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

## Fermentables

| Type  | Name                    | Amount         | Yield  | EBC  |
|-------|-------------------------|----------------|--------|------|
| Grain | Strzegom Pilzneński     | 5 kg (89.8%)   | 80 %   | 4    |
| Grain | Weyermann Caramunich II | 0.25 kg (4.5%) | 71.7 % | 120  |
| Grain | Pszeniczny              | 0.25 kg (4.5%) | 85 %   | 4    |
| Grain | Jęczmień palony         | 0.02 kg (0.4%) | 55 %   | 985  |
| Grain | Carafa III              | 0.05 kg (0.9%) | 70 %   | 1034 |

## Hops

| Use for   | Name                  | Amount | Time   | Alpha acid |
|-----------|-----------------------|--------|--------|------------|
| Boil      | Magnum                | 25 g   | 60 min | 13.5 %     |
| Boil      | Perle                 | 30 g   | 30 min | 7 %        |
| Boil      | Hallertauer           | 20 g   | 10 min | 4.5 %      |
| Boil      | Saaz (Czech Republic) | 20 g   | 10 min | 4.5 %      |
| Whirlpool | Hallertauer           | 20 g   | 15 min | 4.5 %      |
| Whirlpool | Saaz (Czech Republic) | 20 g   | 15 min | 4.5 %      |