

# Düsseldorf ALTBIER

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **36**
- SRM **15.4**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.3 liter(s) / kg**
- Mash size **32.2 liter(s)**
- Total mash volume **39.7 liter(s)**

## Steps

- Temp **53 C**, Time **35 min**
- Temp **64 C**, Time **30 min**
- Temp **70 C**, Time **30 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **32.2 liter(s)** of strike water to **56.8C**
- Add grains
- Keep mash **35 min** at **53C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **77C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount          | Yield | EBC  |
|-------|----------------------------------|-----------------|-------|------|
| Grain | Pilzneński                       | 3 kg (40%)      | 81 %  | 4    |
| Grain | Strzegom Monachijski typ II      | 2.52 kg (33.6%) | 79 %  | 22   |
| Grain | Słód Caramunich Typ II Weyermann | 1 kg (13.3%)    | 73 %  | 120  |
| Grain | Weyermann - Caraamber            | 0.94 kg (12.5%) | 75 %  | 65   |
| Grain | Strzegom pszenica prażona        | 0.04 kg (0.5%)  | 70 %  | 1000 |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | x         | 0 g    | 60 min | 1 %        |
| Boil    | Perle     | 40 g   | 50 min | 6.2 %      |
| Boil    | Tradition | 15 g   | 30 min | 5.5 %      |
| Boil    | Perle     | 20 g   | 20 min | 6.2 %      |
| Boil    | Tradition | 45 g   | 10 min | 5.5 %      |

## Yeasts

| Name               | Type | Form  | Amount | Laboratory |
|--------------------|------|-------|--------|------------|
| Old German Altbier | Ale  | Slant | 200 ml | ---        |