

# Düsseldorf Altbier 22L

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **36**
- SRM **15.5**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.3 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 **21.2 liter(s)** of strike water to **57.7C**
- 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 **12.7 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount          | Yield | EBC  |
|-------|----------------------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński              | 2.51 kg (41.5%) | 80 %  | 4    |
| Grain | Strzegom Monachijski typ II      | 1.95 kg (32.2%) | 79 %  | 22   |
| Grain | Słód Caramunich Typ II Weyermann | 0.94 kg (15.6%) | 73 %  | 120  |
| Grain | Weyermann - Caraamber            | 0.63 kg (10.4%) | 75 %  | 65   |
| Grain | Strzegom pszenica prażona        | 0.03 kg (0.4%)  | 70 %  | 1000 |

## Hops

| Use for | Name      | Amount  | Time   | Alpha acid |
|---------|-----------|---------|--------|------------|
| Boil    | Perle     | 25.14 g | 50 min | 7.2 %      |
| Boil    | Perle     | 18.86 g | 20 min | 7.2 %      |
| Boil    | Tradition | 12.57 g | 30 min | 5.5 %      |
| Boil    | Tradition | 31.43 g | 10 min | 5.5 %      |