

ALTB.T1

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **30**
- SRM **14.9**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **24.4 liter(s)**

Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **68.8C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Pilzneński | 3 kg (57.7%) | 81 % | 4 |
| Grain | Strzegom Monachijski typ I | 1.5 kg (28.8%) | 79 % | 16 |
| Grain | Karmelowy Jasny 30EBC | 0.5 kg (9.6%) | 75 % | 30 |
| Grain | Carafa II | 0.2 kg (3.8%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Magnum | 15 g | 60 min | 13.5 % |
| Boil | Tradition | 20 g | 20 min | 5.5 % |
| Boil | Tradition | 10 g | 5 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| OGA | Ale | Dry | 11.5 g | --- |