

Altbier

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **12.8**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 4.5 kg (93.8%) | 79 % | 16 |
| Grain | Strzegom Karmel 300 | 0.3 kg (6.3%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Tradition | 50 g | 60 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale K-97 | Ale | Dry | 11 g | Fermentis |