

.ALTBIER

- Gravity **12.1 BLG**
- ABV ---
- IBU **47**
- SRM **15.8**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Strzegom Monachijski typ I | 4.5 kg (93.8%) | 79 % | 16 |
| Grain | Caramunich I | 0.25 kg (5.2%) | 79 % | 100 |
| Grain | Carafa III | 0.05 kg (1%) | 70 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | lunga | 25 g | 60 min | 11 % |
| Boil | Tradition | 30 g | 30 min | 5.5 % |
| Boil | Tradition | 15 g | 15 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------|-------|-------|--------|------------------|
| FM50 Kłosy Kansas | Wheat | Slant | 150 ml | Fermentum Mobile |