

# ALTBIER II 13 Blg # 38

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **12.9**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **9.7 liter(s)**
- Total mash volume **11.8 liter(s)**

## Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **9.7 liter(s)** of strike water to **67.8C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **25 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **5.2 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

| Type  | Name                     | Amount         | Yield | EBC  |
|-------|--------------------------|----------------|-------|------|
| Grain | Munich Malt              | 1.5 kg (69.8%) | 80 %  | 18   |
| Grain | Strzegom Pilzneński      | 0.5 kg (23.3%) | 80 %  | 4    |
| Grain | Viking Malt żyto prażone | 0.05 kg (2.3%) | 73 %  | 1000 |
| Grain | Karmelowy Jasny 30EBC    | 0.1 kg (4.7%)  | 75 %  | 30   |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Ariana DE | 15 g   | 30 min | 9.4 %      |

## Yeasts

| Name                         | Type | Form  | Amount | Laboratory       |
|------------------------------|------|-------|--------|------------------|
| FM42 Stare Nadreńskie Gęstwa | Ale  | Slant | 200 ml | Fermentum Mobile |

## Extras

| Type   | Name               | Amount | Use for | Time   |
|--------|--------------------|--------|---------|--------|
| Fining | Whirlfloc tabletki | 0.05 g | Boil    | 10 min |