

# Altbier

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- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **42**
- SRM **9**
- 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 **12.1 liter(s)**
- Total mash volume **16.1 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.6 kg (64.5%)	80 %	16
Grain	Strzegom Wiedeński	1.4 kg (34.7%)	79 %	10
Grain	Strzegom Barwiący	0.03 kg (0.7%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	45 g	60 min	7 %
Boil	Hersbrucker	20 g	20 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US 05	Ale	Slant	200 ml	---