

# Altbier

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- 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