

# Altbier

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- Gravity **12.7 BLG**
- ABV ---
- IBU **53**
- SRM **12.9**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **24.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **26.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.9 liter(s)**
- Total mash volume **19.5 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **13.9 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **23.3 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (89.8%)	80 %	4
Grain	Weyermann Caramunich II	0.25 kg (4.5%)	71.7 %	120
Grain	Pszeniczny	0.25 kg (4.5%)	85 %	4
Grain	Jęczmień palony	0.02 kg (0.4%)	55 %	985
Grain	Carafa III	0.05 kg (0.9%)	70 %	1034

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	13.5 %
Boil	Perle	30 g	30 min	7 %
Boil	Hallertauer	20 g	10 min	4.5 %
Boil	Saaz (Czech Republic)	20 g	10 min	4.5 %
Whirlpool	Hallertauer	20 g	15 min	4.5 %
Whirlpool	Saaz (Czech Republic)	20 g	15 min	4.5 %