

# Altbier

- Gravity **12.6 BLG**
- ABV ---
- IBU **51**
- SRM **11.4**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **70 min**
- Evaporation rate **20 %/h**
- Boil size **16 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.4 liter(s)**
- Total mash volume **12 liter(s)**

## Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **9.4 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **16 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.5 kg (56.1%)	80 %	4
Grain	Monachijski	1 kg (37.4%)	80 %	16
Grain	Crystal 150	0.15 kg (5.6%)	75 %	150
Grain	Carafa III	0.025 kg (0.9%)	70 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Boil	Hallertau	20 g	15 min	4.5 %
Aroma (end of boil)	Hallertau	20 g	0 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Slant	60 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Fining	Mech irlandzki	4 g	Boil	15 min
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