

# Altbier

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **9.8**
- 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 **15.5 liter(s)**
- Total mash volume **20.6 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 **15.5 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15 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	3.5 kg (68%)	79 %	16
Grain	Strzegom Pilzneński	1.5 kg (29.1%)	80 %	4
Grain	Strzegom Karmel 300	0.15 kg (2.9%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	10 g	60 min	8 %
Boil	Lublin (Lubelski)	45 g	45 min	4 %
Boil	Marynka	10 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Liquid	200 ml	Fermentum Mobile