

# imperial altbier

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **45**
- SRM **11.2**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **22.2 liter(s)**

## Steps

- Temp **65 C**, Time **1 min**
- Temp **62 C**, Time **60 min**
- Temp **75 C**, Time **30 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **69.8C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **1 min** at **65C**
- Keep mash **30 min** at **75C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	4 kg (66.7%)	79 %	22
Grain	Strzegom Wiedeński	1 kg (16.7%)	79 %	10
Grain	Weyermann - Melanoiden Malt	0.5 kg (8.3%)	81 %	53
Grain	Płatki owsiane	0.5 kg (8.3%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	13.5 %
Boil	Magnum	15 g	30 min	13.5 %
Boil	Magnum	15 g	15 min	13.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	10 g	fermentis