

# .ALTBIER

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- Gravity **12.1 BLG**
- ABV ---
- IBU **47**
- SRM **15.8**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4.5 kg (93.8%)	79 %	16
Grain	Caramunich I	0.25 kg (5.2%)	79 %	100
Grain	Carafa III	0.05 kg (1%)	70 %	1034

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	60 min	11 %
Boil	Tradition	30 g	30 min	5.5 %
Boil	Tradition	15 g	15 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM50 Kłosy Kansas	Wheat	Slant	150 ml	Fermentum Mobile