

# ALTBIER TREMOR

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- Gravity **12.9 BLG**
- ABV ---
- IBU **48**
- SRM **13.5**
- 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 **75 min**
- Evaporation rate **10 %/h**
- Boil size **29.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **29.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (72.7%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.2%)	79 %	16
Grain	Strzegom Karmel 300	0.5 kg (9.1%)	70 %	300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Taurus	25 g	60 min	15.8 %
Boil	Hallertau Spalt Select	35 g	20 min	2.8 %
Boil	Hallertau Spalt Select	15 g	5 min	2.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis S-04	Ale	Dry	11.5 g	---

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	5 g	Boil	10 min