

# ALTBIER 13 Blg # 37

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **45**
- SRM **12.9**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **9.7 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **7.5 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **25 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Munich Malt	1.5 kg (69.8%)	80 %	18
Grain	Strzegom Pilzneński	0.5 kg (23.3%)	80 %	4
Grain	Viking Malt żyto prażone	0.05 kg (2.3%)	73 %	1000
Grain	Karmelowy Jasny 30EBC	0.1 kg (4.7%)	75 %	30

## Hops

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

## Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Liquid	30 ml	Fermentum Mobile

## Extras

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