

## Altbier 12

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **32**
- SRM **13.1**
- 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

### Steps

- Temp **56 C**, Time **1 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **17.4 liter(s)** of strike water to **62C**
- Add grains
- Keep mash **1 min** at **56C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3.5 kg (60.3%)	79 %	16
Grain	Strzegom Karmel 150	0.25 kg (4.3%)	75 %	150
Grain	Strzegom Barwiący	0.05 kg (0.9%)	68 %	1300
Grain	Strzegom Karmel 30	1 kg (17.2%)	75 %	30
Grain	Strzegom Pilzneński	1 kg (17.2%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	15 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
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Gozdawa Pure Ale Yeast 7	Ale	Dry	11 g	---
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