

## #16 altbier

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- Gravity **11.2 BLG**
- ABV ---
- IBU **20**
- SRM **15.6**
- Style **Blonde Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **56 C**, Time **0 min**
- Temp **64 C**, Time **30 min**
- Temp **73 C**, Time **50 min**
- Temp **75 C**, Time **0 min**

### Mash step by step

- Heat up **17 liter(s)** of strike water to **60.5C**
- Add grains
- Keep mash **0 min** at **56C**
- Keep mash **30 min** at **64C**
- Keep mash **50 min** at **73C**
- Keep mash **0 min** at **75C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Caramunich Malt	0.4 kg (9.4%)	71.7 %	110
Grain	Munich Malt	3.8 kg (89.6%)	80 %	18
Grain	Weyermann - Carafa I	0.04 kg (0.9%)	70 %	690

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Spalt Select	50 g	60 min	3.4 %
Boil	irlandzki mech	5 g	15 min	1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Slant	200 ml	Fermentum Mobile