

# Altbier ES

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **43**
- SRM **9.5**
- Style **Northern German Altbier**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.4 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **16.6 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.6 kg (54.7%)	80 %	5
Grain	Strzegom Wiedeński	2 kg (42.1%)	79 %	10
Grain	Karmelowy żytni Strzegom	0.1 kg (2.1%)	75 %	150
Grain	Strzegom Czekoladowy 1200	0.05 kg (1.1%)	68 %	1202

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	30 g	30 min	17 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	50 ml	Fermentis