

# Northern Altbier

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **33**
- SRM **15.5**
- Style **Northern German Altbier**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **2 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **7 %/h**
- Boil size **21.9 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **18.9 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

## Mash step by step

- Heat up **15.1 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **72C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **21.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3.2 kg (84.8%)	79 %	16
Grain	Weyermann Caramunich 3	0.5 kg (13.2%)	76 %	150
Grain	Carafa II	0.075 kg (2%)	70 %	812

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Aroma (end of boil)	Hellertau Mittelfrüh	20 g	15 min	3.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale K-97	Ale	Slant	200 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Water Agent	soda oczyszczona	2 g	Boil	60 min