

Altbier

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **39**
- SRM **14.5**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **18.7 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **0.8 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1.9 kg (61.1%)	82 %	4
Grain	Strzegom Monachijski typ II	1 kg (32.2%)	79 %	22
Grain	Słód Caramunich Typ II Weyermann	0.15 kg (4.8%)	73 %	120
Grain	Carafa II special	0.06 kg (1.9%)	70 %	812

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	11 %
Boil	Hallertau Mittelfruh	15 g	10 min	4 %
Whirlpool	Hallertau Mittelfruh	10 g	0 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale K-97	Ale	Dry	11 g	Fermentis