

Altbier (A)

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **33**
- SRM **19.7**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **17.4 liter(s)**

Steps

- Temp **57 C**, Time **10 min**
- Temp **63 C**, Time **60 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **63.2C**
- Add grains
- Keep mash **10 min** at **57C**
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **73C**
- Keep mash **5 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **17.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (46.1%)	70 %	4
Grain	Strzegom Monachijski typ I	1.7 kg (39.2%)	70 %	16
Grain	Carafa II	0.14 kg (3.2%)	70 %	1150
Grain	Caramunich® typ I	0.2 kg (4.6%)	70 %	90
Grain	Weyermann - Carapils	0.3 kg (6.9%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	10 g	60 min	3.7 %
Boil	Tettnang	25 g	30 min	3.7 %
Boil	Hallertau Hersbrucker	30 g	30 min	3.5 %
Boil	Tettnang	15 g	5 min	3.7 %
Boil	Hallertau Hersbrucker	20 g	5 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP029 - German Ale/Kölsch Yeast	Ale	Liquid	50 ml	White Labs