

ALT

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **43**
- SRM **11.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **65 C**, Time **90 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **90 min** at **65C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsen Malt	3.5 kg (65.9%)	80.5 %	2
Grain	Weyermann - Light Munich Malt	1 kg (18.8%)	82 %	14
Grain	Aromatic Malt	0.5 kg (9.4%)	77 %	39
Grain	CaraMunich	0.23 kg (4.3%)	70 %	120
Grain	Carafa Special II	0.085 kg (1.6%)	70 %	860

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	28 g	60 min	13.5 %
Boil	Tettnang	15 g	15 min	4 %