

ALTB.T1

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **30**
- SRM **14.9**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **24.4 liter(s)**

Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **68.8C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (57.7%)	81 %	4
Grain	Strzegom Monachijski typ I	1.5 kg (28.8%)	79 %	16
Grain	Karmelowy Jasny 30EBC	0.5 kg (9.6%)	75 %	30
Grain	Carafa II	0.2 kg (3.8%)	70 %	812

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	13.5 %
Boil	Tradition	20 g	20 min	5.5 %
Boil	Tradition	10 g	5 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
OGA	Ale	Dry	11.5 g	---