

ALTMAX

- Gravity **12.6 BLG**
- ABV ---
- IBU **41**
- SRM **15.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.9 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (60.6%)	80 %	4
Grain	Strzegom Monachijski typ I	1.5 kg (30.3%)	79 %	14
Grain	Strzegom Karmel 150	0.4 kg (8.1%)	75 %	150
Grain	Strzegom Barwiący	0.05 kg (1%)	68 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	35 g	60 min	7 %
Boil	Simcoe	5 g	60 min	13.2 %
Boil	Perle	20 g	15 min	7 %
Aroma (end of boil)	Perle	10 g	5 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
gozdawa old german altbier	Ale	Dry	11 g	---