

Altbier

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **42**
- SRM **10.5**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **28 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.3 liter(s)**
- Total mash volume **29.9 liter(s)**

Steps

- Temp **52 C**, Time **5 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.3 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (45.1%)	80 %	4
Grain	Strzegom Monachijski typ I	2 kg (30.1%)	79 %	16
Grain	Melanoiden Malt	0.3 kg (4.5%)	80 %	39
Grain	Carahell	0.25 kg (3.8%)	77 %	26
Grain	Carabohemian	0.4 kg (6%)	75 %	180
Grain	Jęczmień niesłodowany	0.4 kg (6%)	75 %	2
Grain	Briess - 2 Row Carapils Malt	0.3 kg (4.5%)	75 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Spalt Select	30 g	60 min	4.2 %
Boil	Hallertau Spalt Select	30 g	20 min	4.2 %

Boil	Hallertau Spalt Select	30 g	5 min	4.2 %
Boil	Marynka	30 g	60 min	7.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale s-33	Ale	Slant	200 ml	---

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min