

Altbeer

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **39**
- SRM **2.1**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **33 liter(s)**
- Trub loss **5 %**
- Size with trub loss **34.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **41.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **23.5 liter(s)**
- Total mash volume **32.9 liter(s)**

Steps

- Temp **59 C**, Time **20 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **23.5 liter(s)** of strike water to **66.8C**
- Add grains
- Keep mash **20 min** at **59C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **27.7 liter(s)** of **76C** water or to achieve **41.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5.9 kg (62.8%)	80 %	---
Grain	Strzegom Monachijski typ I	1.9 kg (20.2%)	79 %	---
Grain	Carared	0.4 kg (4.3%)	75 %	39
Grain	Caramunich® typ I	0.4 kg (4.3%)	73 %	---
Grain	Pszeniczny	0.8 kg (8.5%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	50 g	60 min	11 %
Boil	tomycki	33 g	10 min	3.3 %
Boil	tomycki	25 g	5 min	3.3 %
Boil	Perle	10 g	5 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
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s-33	Ale	Slant	300 ml	---
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