

Amber ale

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **41**
- SRM **13.6**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **75 min**
- Evaporation rate **20 %/h**
- Boil size **16.8 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **12.6 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **9.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **16.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2 kg (72.7%)	80 %	16
Grain	Strzegom Pilzneński	0.4 kg (14.5%)	80 %	4
Grain	Caramunich® typ I	0.25 kg (9.1%)	73 %	80
Grain	Weyermann - Acidulated Malt	0.05 kg (1.8%)	80 %	6
Grain	Black (Patent) Malt	0.05 kg (1.8%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	20 g	60 min	6.2 %
Boil	Hallertau Tradition	30 g	15 min	6.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Liquid	30 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	4 g	Boil	15 min
Other	Witamina C	2 g	Bottling	---