

alt

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **36**
- SRM **9**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **62 C**, Time **15 min**
- Temp **71 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.2 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	4.5 kg (86.5%)	80 %	20
Grain	Platki owsiane	0.5 kg (9.6%)	60 %	3
Grain	Weyermann pszeniczny jasny	0.2 kg (3.8%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mount Hood	40 g	60 min	5.5 %
Boil	Mount Hood	40 g	15 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Dry	11.5 g	Fermentis