

Alt

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **38**
- SRM **15.3**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Red Active	3 kg (54.5%)	80 %	35
Grain	Viking Red Ale	1 kg (18.2%)	75 %	70
Grain	Pszeniczny	0.5 kg (9.1%)	80 %	4
Grain	Żytni	0.5 kg (9.1%)	85 %	8
Grain	Caramunich® typ I	0.5 kg (9.1%)	73 %	80

Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Hallertau Spalt Select	30 g	60 min	3.4 %
First Wort	Magnum	20 g	60 min	13.5 %
Boil	Hallertau Spalt Select	35 g	20 min	3.4 %
Whirlpool	Hallertau Spalt Select	35 g	0 min	3.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP029 - German Ale/Kölsch Yeast	Ale	Liquid	70 ml	White Labs