

Alcik

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **38**
- SRM **7.6**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **10.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **13.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.1 liter(s)**
- Total mash volume **11.7 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **5 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **9.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **5 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **13.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	1.3 kg (50%)	79 %	16
Grain	Strzegom Wiedeński	1 kg (38.5%)	79 %	10
Grain	Strzegom Monachijski typ II	0.3 kg (11.5%)	79 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	20 g	60 min	7 %
Boil	Tattenger	5 g	60 min	4.8 %
Boil	Hersbrucker	10 g	15 min	3 %
Boil	Hallertau Spalt Select	15 g	0 min	3.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand koelsch	Ale	Slant	300 ml	Lallemand