

Alt

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **30**
- SRM **13.2**
- 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 **60 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **25.2 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **25.2 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **6.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4.5 kg (71.4%)	79 %	16
Grain	Strzegom Karmel 300	0.3 kg (4.8%)	70 %	299
Grain	Strzegom Pilzneński	1.5 kg (23.8%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	50 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM26 Belgijskie Pagórki	Ale	Liquid	1500 ml	Fermentum Mobile