

Alt

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **35**
- SRM **17.3**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **30 min**
- Temp **70 C**, Time **30 min**

Mash step by step

- Heat up **14.9 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **70C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3.6 kg (72.6%)	79 %	22
Grain	Strzegom Pilzneński	1.2 kg (24.2%)	80 %	4
Grain	Strzegom Barwiący	0.16 kg (3.2%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Galaxy	15 g	5 min	15 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Slant	200 ml	Fermentis