

Altbier

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **25**
- SRM **11.6**
- Style **Northern German 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 **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

Steps

- Temp **56 C**, Time **1 min**
- Temp **65 C**, Time **30 min**
- Temp **73 C**, Time **40 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **61.1C**
- Add grains
- Keep mash **1 min** at **56C**
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **73C**
- Keep mash **1 min** at **75C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.7 kg (60%)	80 %	16
Grain	Pilzneński	1.5 kg (33.3%)	81 %	4
Grain	Strzegom Karmel 300	0.3 kg (6.7%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	40 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	17.25 g	Fermentis