

#1 ALT

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **28**
- SRM **12.4**
- Style **Northern German 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 **14.9 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.9 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (60.6%)	81 %	4
Grain	Monachijski	1.5 kg (30.3%)	80 %	16
Grain	Strzegom Karmel 150	0.4 kg (8.1%)	75 %	150
Grain	Strzegom Barwiący	0.05 kg (1%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	50 g	60 min	4.3 %
Aroma (end of boil)	Tradition	20 g	15 min	4.3 %
Aroma (end of boil)	Tradition	5 g	0 min	4.3 %