

ALTBIER

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **13**
- SRM **11.7**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**
- Temp **79 C**, Time **1 min**

Mash step by step

- Heat up **18.2 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **1 min** at **79C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	5 kg (96.2%)	79 %	16
Grain	Strzegom Karmel 300	0.2 kg (3.8%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Spalt	20 g	55 min	4.3 %
Boil	Spalt	10 g	25 min	4.3 %
Boil	Spalt	10 g	5 min	4.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale