

## #103 Under 10 Sour Ale

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **12**
- SRM **3.8**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **8 liter(s)**
- Trub loss **4 %**
- Size with trub loss **8.3 liter(s)**
- Boil time **65 min**
- Evaporation rate **14 %/h**
- Boil size **10.2 liter(s)**

### Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7 liter(s)**
- Total mash volume **9 liter(s)**

### Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **27 min**
- Temp **76 C**, Time **2 min**
- Temp **40 C**, Time **2800 min**

### Mash step by step

- Heat up **7 liter(s)** of strike water to **42.9C**
- Add grains
- Keep mash **2800 min** at **40C**
- Keep mash **50 min** at **65C**
- Keep mash **27 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **5.2 liter(s)** of **76C** water or to achieve **10.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pszeniczny	1 kg (50%)	82 %	5
Grain	BESTMALZ - Best Heidelberg	0.72 kg (36%)	80.5 %	3
Grain	Płatki owsiane	0.24 kg (12%)	85 %	3
Grain	Płatki pszeniczne	0.04 kg (2%)	75 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga PL	4 g	45 min	11 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	40 ml	---

### Extras

Type	Name	Amount	Use for	Time
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Other	Bakterie kwasu mlekowego	100 g	Mash	2800 min
Water Agent	Kwas fosforowy	0.96 g	Mash	60 min
Water Agent	CaCl2	0.32 g	Mash	60 min
Other	Łuska ryżowa	100 g	Mash	60 min