

#13 Mango sour ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **18**
- SRM **3.1**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.1 liter(s)**
- Total mash volume **15.5 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12.1 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.83 kg (53%)	81 %	4
Grain	Pszeniczny	1 kg (29%)	85 %	4
Grain	Płatki owsiane	0.62 kg (18%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	15 g	60 min	9 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	150 ml	---

Extras

Type	Name	Amount	Use for	Time
Flavor	Kwas mlekowy	50 g	Bottling	---
Flavor	Pulpa z mango	850 g	Primary	4 day(s)
Po 3 dniach fermentacji burzliwej dodatek pulpy z mango				