

# XXII Mango Marakuja Milkshake APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **54**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **20.5 liter(s)**

## Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

## Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **20.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.45 kg (70%)	79 %	6
Grain	Strzegom Monachijski typ I	0.7 kg (20%)	79 %	16
Grain	Płatki owsiane	0.35 kg (10%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Equinox	20 g	30 min	13.1 %
Aroma (end of boil)	Mosaic	20 g	30 min	10 %
Whirlpool	Equinox	10 g	5 min	13.1 %
Whirlpool	Mosaic	10 g	5 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	500 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Flavor	Laktoza	500 g	Boil	15 min
Flavor	Pulpa z Marakui	1130 g	Secondary	7 day(s)
Flavor	Pulpa z Mango	1700 g	Secondary	7 day(s)