

MILKSHAKE IPA z Mango

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **30**
- SRM **4.1**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **27.5 liter(s)**
- Total mash volume **32.5 liter(s)**

Steps

- Temp **70 C**, Time **2 min**
- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **27.5 liter(s)** of strike water to **72.4C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **2 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **3.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (50%)	80 %	5
Grain	Płatki owsiane	1 kg (14.3%)	60 %	3
Grain	Płatki pszeniczne	0.5 kg (7.1%)	60 %	3
Sugar	Milk Sugar (Lactose)	1 kg (14.3%)	76.1 %	0
Adjunct	Pulpa z mango	1 kg (14.3%)	70 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	60 min	3.7 %
Aroma (end of boil)	Vic Secret	30 g	5 min	18.2 %
Whirlpool	Topaz	30 g	5 min	21.1 %
Dry Hop	Topaz	30 g	5 day(s)	21.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Flavor	Laktoza	1000 g	Boil	10 min