

MILKSHAKE IPA #1

- Gravity **10 BLG**
- ABV **4 %**
- IBU **26**
- SRM **4.8**
- 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 **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.4 liter(s)**
- Total mash volume **16 liter(s)**

Steps

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

Mash step by step

- Heat up **12.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **20 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.2 kg (54.3%)	80 %	5
Grain	Viking malt słód pszeniczny	0.7 kg (17.3%)	82 %	5
Grain	Płatki owsiane	0.5 kg (12.3%)	85 %	3
Grain	Słód Karmelowy 150EBC	0.15 kg (3.7%)	75 %	150
Sugar	Milk Sugar (Lactose)	0.5 kg (12.3%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Aroma (end of boil)	Galaxy	10 g	0 min	15 %
Aroma (end of boil)	Mosaic	10 g	0 min	10 %
Aroma (end of boil)	Amarillo	10 g	0 min	9.5 %
Dry Hop	Galaxy	60 g	3 day(s)	15 %
Dry Hop	Mosaic	60 g	3 day(s)	10 %
Dry Hop	Amarillo	60 g	3 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	17 g	Fermentis