

## #92 Milkshake IPA

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **35**
- SRM **4.4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **11.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.8 liter(s)**
- Boil time **67 min**
- Evaporation rate **12 %/h**
- Boil size **14.6 liter(s)**

### Mash information

- Mash efficiency **63 %**
- Liquor-to-grist ratio **4.65 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **18.4 liter(s)**

### Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **15.1 liter(s)** of strike water to **73.2C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **2.8 liter(s)** of **76C** water or to achieve **14.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.65 kg (43.7%)	80 %	5
Grain	Płatki owsiane	0.7 kg (18.5%)	85 %	3
Grain	Pszeniczny	0.5 kg (13.2%)	85 %	4
Sugar	Milk Sugar (Lactose)	0.4 kg (10.6%)	85 %	0
Grain	Żytni	0.3 kg (7.9%)	85 %	8
Grain	Diastatyczny	0.1 kg (2.6%)	80 %	4
Sugar	Milk Sugar (Lactose)	0.128 kg (3.4%)	85 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	6 g	50 min	11 %
Whirlpool	Citra	16.5 g	15 min	13.3 %
Whirlpool	Hallertau Blanc	17 g	15 min	8.9 %
Whirlpool	Chinook	15 g	15 min	13.3 %
Dry Hop	Citra - Fermentacja burzliwa	9 g	11 day(s)	13.3 %
Dry Hop	Chinook - Ferm. burzliwa	6 g	11 day(s)	13.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	150 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek wapnia	0.5 g	Mash	80 min
Flavor	Mleko odtłuszczone w proszku	250 g	Boil	12 min
Fining	Whirlfloc	1.25 g	Boil	10 min
Herb	Hibiskus	50 g	Boil	7 min