

# Milkshake IPA #1 - Browar na Wyżynie

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **39**
- SRM **4.6**

## Batch size

- Expected quantity of finished beer **19.5 liter(s)**
- Trub loss **6 %**
- Size with trub loss **20.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **23 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale base Viking Malt	3 kg (51.4%)	81 %	5
Grain	pszeniczny Viking Malt	1 kg (17.1%)	84 %	5
Grain	pale ale Viking Malt	0.5 kg (8.6%)	79 %	8
Grain	płatki owsiane błyskawiczne	0.6 kg (10.3%)	50 %	3
Grain	płatki pszenne błyskawiczne	0.6 kg (10.3%)	50 %	1
Sugar	cukier z owoców 0.14	0.14 kg (2.4%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Junga (PL) - granulát	20 g	60 min	12.5 %
Aroma (end of boil)	Ekuanot (USA) - granulát	20 g	5 min	16.1 %
Aroma (end of boil)	Mosaic (USA) - granulát	20 g	5 min	10.9 %
Whirlpool	Ekuanot (USA) - granulát	35 g	0 min	16.1 %

Whirlpool	Mosaic (USA) - granulat	35 g	0 min	10.9 %
Whirlpool	Amarillo (USA) - granulat	25 g	0 min	7.5 %
Dry Hop	Ekuanot (USA) - granulat	35 g	3 day(s)	16.1 %
Dry Hop	Mosaic (USA) - granulat	35 g	3 day(s)	10.9 %
Dry Hop	Amarillo (USA) - granulat	25 g	3 day(s)	7.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM55 Zielone Wzgórze	Ale	Liquid	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	chlorek sodu	7 g	Mash	70 min
Water Agent	siarczan wapnia	4 g	Mash	70 min
Water Agent	kwask mlekowy 80%	4 g	Mash	70 min
Water Agent	woda demineralizowana	20000 g	Mash	70 min
Flavor	laktoza	500 g	Boil	15 min
Other	Ekuanot (USA) - granulat	10 g	Primary	7 day(s)
Other	Mosaic (USA) - granulat	10 g	Primary	7 day(s)
Flavor	10L - hortex owoce tropikalne 2 x 450g	900 g	Secondary	7 day(s)
Spice	Laska wanilli odkażona wódką	2 g	Secondary	7 day(s)
Flavor	10L - Maliny 400g + jagody 300g	700 g	Secondary	7 day(s)

## Notes

- Profil wody (blend wody Lublin Dziesiąta z wodą demineralizowaną 30%:70%):  
Ca+2 Mg+2 Na+ Cl- SO4-2 Alkalinity Residual Alk.  
73.5 3.9 97.1 152.1 85.6 45.9 -8.8

SO42-/Cl- ratio: 0.6 Very Malty  
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