

# Urodzinowy Klarow(n)y Kwas

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **4.4**
- Style **Fruit Beer**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.1 liter(s)**
- Total mash volume **15.5 liter(s)**

## Steps

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

## Mash step by step

- Heat up **12.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (92.8%)	80 %	5
Grain	Słód pszeniczny Bestmalz	0.25 kg (7.2%)	82 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	18 g	25 min	11 %
Aroma (end of boil)	Azacca	20 g	3 min	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Flavor	Pulpa Mango	1000 g	Secondary	7 day(s)
Flavor	kwas mlekowy	22 g	Bottling	---

## Notes

- Dodatek kwasu mlekowego:  
Okolo 2ml/litr piwa. Dodać po fermentacji  
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