

# Waleczny Uruk-hai

- Gravity **24.6 BLG**
- ABV **11.4 %**
- IBU **109**
- SRM **22.5**
- Style **American Barleywine**

## Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **72 liter(s)**
- Total mash volume **96 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**

## Mash step by step

- Heat up **72 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	16 kg (66.7%)	80 %	5
Grain	Strzegom Pszeniczny	7 kg (29.2%)	81 %	6
Grain	Strzegom Czekoladowy ciemny	0.5 kg (2.1%)	68 %	1200
Grain	Caraaroma	0.5 kg (2.1%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Glacier	150 g	60 min	5.5 %
Boil	Glacier	110 g	30 min	5.5 %
Boil	Glacier	100 g	15 min	5.5 %
Whirlpool	Glacier	100 g	15 min	5.5 %
Boil	Columbus/Tomahawk/Zeus	150 g	60 min	15.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	800 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
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Fining	Whirlfloc	2.5 g	Boil	15 min
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## Notes

- Lekka improwizacja barley win'a J. J Palmera  
800 mld komórek na 54 litry  
Profil wody:  
Ca 75-125  
Mg 20  
So4 50-100  
Cl 100-150  
*Mar 19, 2022, 9:00 PM*