

# Polish Hammer

- Gravity **21.3 BLG**
- ABV ---
- IBU **95**
- SRM **79**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **7 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **67 C**, Time **75 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **75 min** at **67C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4 kg (57.1%)	80 %	7
Grain	Czekoladowy	0.4 kg (5.7%)	60 %	788
Grain	Weyermann - Carafa II	0.4 kg (5.7%)	70 %	837
Grain	Casle Malting Whisky Nature	1 kg (14.3%)	85 %	4
Grain	Pszeniczny	0.5 kg (7.1%)	85 %	4
Grain	Jęczmień palony	0.4 kg (5.7%)	55 %	985
Grain	Płatki owsiane	0.3 kg (4.3%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	100 g	60 min	7 %
Aroma (end of boil)	East Kent Goldings	100 g	10 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	10 ml	Fermentum Mobile
Safale US-05	Ale	Dry	10 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Spice	wanilia	5 g	Boil	10 min
Spice	cynamon	5 g	Boil	10 min
Flavor	laktoza	100 g	Boil	15 min
Flavor	cukier ciemny	100 g	Boil	15 min

## Notes

- Do lezakowania:  
7 dni - płatki dębowe  
3 dni - sól , kawa , kakao , śliwki suszone  
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