

# Pliny the Elder

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **91**
- SRM **5.5**
- Style **Imperial IPA**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.7 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **16.2 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **17.4 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **77C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **16.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep@ Pils	3.8 kg (92.2%)	82 %	4
Sugar	Cukier	0.25 kg (6.1%)	100 %	---
Grain	Viking Karmel 100	0.07 kg (1.7%)	75 %	100

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	13.1 %
Boil	Columbus/Tomahawk/Zeus	5 g	60 min	15.7 %
Boil	Amarillo	5 g	45 min	8.4 %
Boil	Simcoe	15 g	30 min	14.5 %
Whirlpool	Cascade	10 g	15 min	8.3 %
Whirlpool	Centennial	10 g	15 min	10.5 %
Whirlpool	Amarillo	10 g	15 min	8.4 %
Whirlpool	Simcoe	10 g	15 min	14.5 %
Dry Hop	Columbus/Tomahawk/Zeus	45 g	4 day(s)	15.7 %
Dry Hop	Centennial	25 g	4 day(s)	10.5 %
Dry Hop	Simcoe	25 g	4 day(s)	14.5 %

Dry Hop	Columbus/Tomahawk/Zeus	50 g	2 day(s)	15.7 %
Dry Hop	Centennial	25 g	2 day(s)	10.5 %
Dry Hop	Simcoe	25 g	2 day(s)	14.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	90 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	6.8 g	Mash	90 min
Water Agent	sól epsom	3.3 g	Mash	90 min
Water Agent	chlorek wapnia	0.2 g	Mash	90 min

## Notes

- 2MCBH0C 10,1 l kranówka + 10 l RO  
Ca - 118,3  
Mg - 24,3  
Na - 55  
Cl - 51,7  
SO4 - 269,6  
alk.rez - 2,3  
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