

# Półmaraton

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **53**
- SRM **8**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **27.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **64 C**, Time **75 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **75 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pale Ale Strzegom	5 kg (75.8%)	79 %	6
Grain	Słód Pszeniczny Bestmalz	1 kg (15.2%)	82 %	5
Grain	Słód Caramel Pils	0.35 kg (5.3%)	75 %	4
Grain	Słód Crystal 160 EBC	0.25 kg (3.8%)	73.5 %	155

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	10 g	45 min	12.3 %
Boil	Citra	10 g	45 min	12.9 %
Boil	Mosaic	10 g	15 min	12.3 %
Boil	Citra	10 g	15 min	12.9 %
Boil	Amarillo	10 g	15 min	8.5 %
Boil	Mosaic	10 g	7 min	12.3 %
Boil	Citra	10 g	7 min	12.9 %
Boil	Amarillo	10 g	7 min	8.5 %
Boil	Mosaic	15 g	2 min	12.3 %
Boil	Citra	15 g	2 min	12.9 %

Boil	Amarillo	20 g	2 min	8.5 %
Aroma (end of boil)	Mosaic	10 g	0 min	12.3 %
Aroma (end of boil)	Citra	10 g	0 min	12.9 %
Aroma (end of boil)	Amarillo	10 g	0 min	8.5 %
Dry Hop	Mosaic	50 g	2 day(s)	12.3 %
Dry Hop	Citra	50 g	2 day(s)	12.9 %
Dry Hop	Amarillo	50 g	2 day(s)	8.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
ALE 514	Ale	Dry	12.5 g	Mauribrew

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	2 g	Mash	---
Fining	Mech Irlandzki	5 g	Boil	15 min