

# harcerskie

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- Gravity **4.6 BLG**
- ABV **1.7 %**
- IBU **13**
- SRM **3.7**
- Style **English IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **64 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.1 liter(s)**
- Total mash volume **8.2 liter(s)**

## Steps

- Temp **72 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **6.1 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **21.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	1 kg (48.8%)	81 %	5
Grain	Pszeniczny	0.1 kg (4.9%)	85 %	4
Grain	Strzegom Monachijski typ I	0.7 kg (34.1%)	79 %	16
Grain	Cara-Pils/Dextrine	0.2 kg (9.8%)	72 %	4
Grain	Strzegom Karmel 150	0.05 kg (2.4%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	10 g	60 min	6 %
Boil	Cascade	10 g	15 min	6 %
Whirlpool	Cascade	10 g	0 min	6 %
Dry Hop	Cascade	30 g	3 day(s)	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis