

# 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  |