

# Kopiący niedźwiedź

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **52**
- SRM **8.3**
- Style **English IPA**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

## Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **17.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale	2 kg (34.5%)	--- %	4
Grain	Monachijski	2.5 kg (43.1%)	--- %	24
Grain	Karmelowy Czerwony	0.3 kg (5.2%)	75 %	59
Grain	Pilzneński	1 kg (17.2%)	81 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Boil	Cascade PL	15 g	15 min	5.2 %
Aroma (end of boil)	Citra	15 g	15 min	12 %
Dry Hop	Huell Melon	40 g	3 day(s)	7.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Herb	Pędy sosny	15 g	Mash	15 min