

# Z miodem

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **20.6**
- Style **American 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 **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **13.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **20 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (57.7%)	82 %	4
Grain	Strzegom Czekoladowy jasny	0.4 kg (7.7%)	68 %	400
Grain	Strzegom Karmel 300	0.5 kg (9.6%)	70 %	299
Grain	Strzegom Monachijski typ II	0.5 kg (9.6%)	79 %	22
Liquid Extract	Miód Gryczany (Buckwheat Honey)	0.8 kg (15.4%)	70 %	40

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	18 g	50 min	4.5 %
Boil	East Kent Goldings	25 g	60 min	5.1 %
Boil	Cascade	15 g	20 min	6 %
Boil	Citra	10 g	10 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Dry	11.5 g	Fermentis
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