

## #3 Karmel Marynek

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **27**
- SRM **7.5**
- Style **Blonde Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.6 liter(s)**

### Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bruntal Pale Ale	5 kg (95.2%)	80 %	7.5
Grain	Karmelowy Jasny 120	0.25 kg (4.8%)	75 %	120

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	8.8 %
Aroma (end of boil)	Marynka	20 g	20 min	8.8 %
Aroma (end of boil)	Marynka	20 g	7 min	8.8 %
Dry Hop	Marynka	30 g	7 day(s)	8.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	100 ml	Fermentis

### Notes

- drożdże z gęstwy po poprzednim piwie  
nastaw 16.06.2017  
13,5 blg  
cicha 26.06.2017  
2blg  
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