

# Karmelek

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **19**
- SRM **25**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **31.9 liter(s)**

## Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **75 C**, Time **5 min**

## Mash step by step

- Heat up **24.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (70.4%)	80 %	4
Grain	Weyermann - Carafa I	0.2 kg (2.8%)	70 %	690
Grain	Karmelowy żytni Strzegom	0.3 kg (4.2%)	75 %	150
Grain	Pszenica niesłodowana	0.8 kg (11.3%)	75 %	3
Grain	Jęczmień palony	0.3 kg (4.2%)	55 %	985
Grain	Płatki owsiane	0.5 kg (7%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	150 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	500 g	Boil	15 min

### Notes

- Słody palone oraz jęczmień palony dodawane w połowie zacieranie, około 30-stej minuty  
*Nov 14, 2017, 6:38 PM*