

# Weselne Maćka i Oli

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **26.4**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **22.1 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **5 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **17.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (71.4%)	80 %	5
Grain	Weyermann - Carawheat	0.3 kg (6.1%)	77 %	97
Grain	Biscuit Malt	0.3 kg (6.1%)	79 %	50
Grain	Jęczmień palony	0.2 kg (4.1%)	55 %	985
Grain	Fawcett - Dark Crystal	0.2 kg (4.1%)	71 %	300
Grain	Fawcett - Pale Chocolate	0.2 kg (4.1%)	71 %	600
Grain	Special W	0.2 kg (4.1%)	70 %	300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	15 g	60 min	14.3 %
Boil	East Kent Goldings	10 g	20 min	5.1 %
Boil	Challenger	10 g	20 min	7 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
FM12 W szkocką kratę	Ale	Liquid	200 ml	fermentum mobile