

# Marcowe 1

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **18**
- SRM **6.1**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

## Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **35 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **35 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (62.5%)	81 %	4
Grain	Strzegom Monachijski typ I	0.8 kg (14.3%)	79 %	16
Grain	Strzegom Wiedeński	0.8 kg (14.3%)	79 %	10
Grain	Weyermann - Carapils	0.3 kg (5.4%)	78 %	4
Grain	Caramunich® typ I	0.2 kg (3.6%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Relax	10 g	60 min	1 %
Boil	Mount Hood	30 g	60 min	5.3 %
Boil	Relax	20 g	15 min	1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11.5 g	Fermentis

## Notes

- Z przerwy białkowej powoli podgrzewać (prze około 20 minut) do temperatury 63  
*Jan 10, 2020, 7:47 PM*