Marcowe 2017 ****

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **27**
- SRM **6.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **90 min**
- Evaporation rate **6 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.96 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26.7 liter(s)**

Steps

- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński Optima	5 kg *(74.1%)*	80.5 %	4
Grain	Wiedeński Optima	1 kg *(14.8%)*	79.2 %	9
Grain	Pszeniczny Weyermann	0.25 kg *(3.7%)*	82 %	4
Grain	Karmelowy jasny 40-60 Optima	0.5 kg *(7.4%)*	75.3 %	60

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga granulat	15 g	30 min	12.9 %
Boil	Oktawia granulat	15 g	20 min	7.8 %
Boil	Marynka granulat	15 g	10 min	7.7 %
Boil	Lubelski granulat	30 g	1 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W-34/70	Lager	Slant	500 ml	Fermentis

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.