Markowe Marcowe

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **25**
- SRM **9.9**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **7.3 liter(s)**
- Total mash volume **10.2 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **7.3 liter(s)** of strike water to **58.4C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	1.3 kg *(44.8%)*	79 %	10
Grain	Strzegom Monachijski typ II	0.8 kg *(27.6%)*	79 %	22
Grain	Cara Blonde - Castle Malting	0.4 kg *(13.8%)*	78 %	20
Grain	Karmelowy Czerwony	0.2 kg *(6.9%)*	75 %	59
Grain	Słód pszeniczny Bestmalz	0.2 kg *(6.9%)*	82 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	5 g	60 min	6 %
Boil	Sybilla	10 g	30 min	7 %
Aroma (end of boil)	Magnum	15 g	5 min	10 %