

Maro dunkel

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **9**
- SRM **10.1**
- Style **Dunkelweizen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **16.4 liter(s)**

Steps

- Temp **44 C**, Time **10 min**
- Temp **73 C**, Time **30 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **10 min** at **44C**
- Keep mash **30 min** at **73C**
- Keep mash **15 min** at **76C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1 kg (24.4%)	80 %	4
Grain	Strzegom Monachijski typ II	1 kg (24.4%)	79 %	22
Grain	Pszeniczny	2 kg (48.8%)	85 %	4
Grain	Czekoladowy	0.1 kg (2.4%)	60 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	15 g	60 min	4 %
Boil	Lublin (Lubelski)	15 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP351 - Bavarian Weizen Yeast	Wheat	Dry	10 g	White Labs