

Tmave

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **24**
- SRM **40.6**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (66.7%)	81 %	4
Grain	Dekstrynowy	1 kg (16.7%)	79 %	14
Grain	Weyermann - Dehusked Carafo III	0.5 kg (8.3%)	70 %	1024
Grain	Jęczmień palony	0.5 kg (8.3%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	50 g	60 min	5.1 %