

# Tmave Browar Wyzerowana Jednostka

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **22**
- SRM **23.2**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **32.6 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **32.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (57.7%)	81 %	4
Grain	Strzegom Monachijski typ II	1.5 kg (28.8%)	79 %	22
Grain	Strzegom Karmel 150	0.4 kg (7.7%)	75 %	150
Grain	Strzegom Barwiący	0.3 kg (5.8%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	80 min	10 %
Boil	Saaz (Czech Republic)	25 g	35 min	4.5 %
Boil	Saaz (Czech Republic)	25 g	10 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - Pilsen Lager	Lager	Liquid	1500 ml	Wyeast Labs