

# PILS zwykłe piwo

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **4.4**
- Style **Dortmunder Export**

## 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 **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **8.4 liter(s)**
- Total mash volume **10.8 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **8.4 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (83.3%)	81 %	4
Grain	Strzegom Monachijski typ I	0.4 kg (16.7%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	15 g	60 min	4.5 %
Boil	Saaz (Czech Republic)	15 g	20 min	4.5 %
Boil	Saaz (Czech Republic)	15 g	5 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Bavarian lager m76 Mangrove jack	Lager	Dry	12.5 g	Mangrove Jack