

# polskie

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **26**
- SRM **4.6**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **13.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **6.3 liter(s)**
- Total mash volume **8.8 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**
- Temp **79 C**, Time **10 min**

## Mash step by step

- Heat up **6.3 liter(s)** of strike water to **71.5C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **10 min** at **79C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **13.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (80%)	80 %	4
Grain	Strzegom Monachijski typ I	0.5 kg (20%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	6.5 %
Boil	Lublin (Lubelski)	7 g	20 min	4 %
Boil	Lublin (Lubelski)	7 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's -M15 Empire Ale	Ale	Dry	11.5 g	Mangrove Jack's

## Notes

- 5-7 dni 16-18C, 2-4 tygodni 16C, 4 tygodnie picie  
*Sep 26, 2019, 6:23 PM*