

# Cisza wyborcza

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **41**
- SRM **68.5**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **28 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **25 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **50 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **19.4 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **62C**
- Keep mash **1 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (63.1%)	81 %	5
Grain	Dark Chocolate Malt	1 kg (18%)	60 %	1200
Grain	Carafa typ 1	0.6 kg (10.8%)	70 %	900
Grain	Pszeniczny Czekoladowy	0.45 kg (8.1%)	73 %	1001

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	13.2 %
Boil	Marynka PH	30 g	60 min	7.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	1500 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
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Water Agent	Kreda piwowarska	8 g	Boil	60 min
Water Agent	Cynk + odżywka	1 g	Boil	60 min
Fining	Whirlfloc T	1 g	Boil	15 min

## Notes

- Woda z Biedry 2  
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