

# Śląskie pełne

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **13**
- SRM **4.7**
- Style **Specialty Beer**

## 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 **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10 liter(s)**
- Total mash volume **12.5 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **10 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **5.2 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	1.5 kg (60%)	85 %	8
Grain	Weyermann - Grodziski	1 kg (40%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	3 g	60 min	11.5 %
Boil	lunga	3 g	15 min	11.5 %
Boil	lunga	3 g	5 min	11.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra OYL-071	Ale	Dry	10 g	Omega

## Extras

Type	Name	Amount	Use for	Time
Spice	majeranek	10 g	Boil	15 min
Spice	majeranek	8 g	Boil	5 min

Spice	ziele angielskie	2 g	Secondary	1 day(s)
Spice	liść laurowy	2 g	Secondary	1 day(s)

## Notes

- Dodatek kwasu mlekowego 1,2ml/litr.  
Nagazowanie 1.6 vol

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