

# Esb ciemno-złoty, PaleLager

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **25**
- SRM **6.3**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **52 liter(s)**
- Trub loss **5 %**
- Size with trub loss **54.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **65.8 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **30 liter(s)**
- Total mash volume **42 liter(s)**

## Steps

- Temp **66 C**, Time **50 min**
- Temp **74 C**, Time **20 min**

## Mash step by step

- Heat up **30 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **20 min** at **74C**
- Sparge using **47.8 liter(s)** of **76C** water or to achieve **65.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	11 kg (89.4%)	85 %	6
Grain	Strzegom Karmel 150	0.5 kg (4.1%)	75 %	120
Grain	Caramel/Crystal Malt - 10L	0.5 kg (4.1%)	75 %	20
Sugar	Cukier	0.3 kg (2.4%)	100 %	1

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magn	35 g	60 min	11 %
Boil	Lublin (Lubelski)	35 g	20 min	4.5 %
Whirlpool	Lublin (Lubelski)	44 g	40 min	4.5 %
Whirlpool	Saaz (Czech Republic)	20 g	40 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	40 ml	White Labs

Trochę mało drożdży. 26L brzezki SG 1.047. Pozostałe 27 L SG 1.049 to Lager na gęstwie S 189 ( 150 ml)

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Kwas mlekowy	4 g	Mash	5 min
Other	Odżywka	5 g	Primary	7 day(s)

## Notes

- Brzezka podzielona na:
  - 1) 26 litrów SG 1047 Esb WLP004 underpitching temp 14\*
  - 2) 27 litrów lager SG 1049 S189 gestwa 300ml

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