

jesienne

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **16.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.4 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **19.3 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **21.1 liter(s)** of **76C** water or to achieve **29.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pils	4 kg (72.7%)	82 %	4
Grain	Strzegom Monachijski typ I	0.7 kg (12.7%)	79 %	16
Grain	Strzegom Karmel 30	0.3 kg (5.5%)	75 %	30
Grain	Strzegom Karmel 150	0.2 kg (3.6%)	75 %	150
Grain	Strzegom Czekoladowy jasny	0.2 kg (3.6%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.1 kg (1.8%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	8.8 %
Boil	Sladek	20 g	20 min	8.5 %
Boil	Sladek	20 g	1 min	8.5 %
Whirlpool	Sladek	20 g	20 min	8.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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us-05	Ale	Slant	200 ml	fermentis
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