

Świąteczne ciemne

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **34**
- SRM **18.1**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **69 C**, Time **45 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **45 min** at **69C**
- Keep mash **10 min** at **72C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (52.5%)	81 %	4
Grain	Pszeniczny	1 kg (17.5%)	85 %	4
Grain	Strzegom Karmel 150	0.5 kg (8.8%)	75 %	150
Grain	Płatki owsiane	0.5 kg (8.8%)	85 %	3
Grain	Jęczmień palony	0.12 kg (2.1%)	55 %	985
Grain	Barwiący	0.09 kg (1.6%)	55 %	985
Sugar	Cukier	0.5 kg (8.8%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	15 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale T-58	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
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Spice	Cukier waniliowy	16 g	Boil	15 min
Spice	Cynamon	7 g	Boil	15 min
Spice	Gałka muszkatołowa	6 g	Boil	15 min
Spice	Sliwki suszone	300 g	Boil	15 min
Spice	Skórka pomarańczy	20 g	Boil	15 min
Spice	Goździki	5 g	Boil	15 min