

# czarny grudzień

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **25**
- SRM **42.2**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	4 kg (57.1%)	79 %	10
Grain	Strzegom Monachijski typ I	1 kg (14.3%)	79 %	16
Grain	Strzegom Czekoladowy jasny	0.5 kg (7.1%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.5 kg (7.1%)	68 %	1200
Grain	Weyermann Caramunich 3	0.5 kg (7.1%)	76 %	150
Liquid Extract	Miód Gryczany (Buckwheat Honey)	0.5 kg (7.1%)	70 %	40

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	60 min	4 %
Boil	Lublin (Lubelski)	25 g	10 min	4 %
Boil	Lublin (Lubelski)	25 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	ksylitol	250 g	Boil	15 min
Spice	goździki sztuk	10 g	Boil	10 min
Spice	cynamon sztuk	1 g	Boil	10 min
Spice	anyż	3 g	Boil	10 min

Spice	skorka z 1 pomaranczy	1 g	Boil	10 min
Fining	mech irlandzki	5 g	Boil	15 min