

## Ostatki

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **33**
- SRM **22.4**
- Style **American Brown Ale**

### 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 **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **23.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **18.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (57.1%)	80 %	5
Grain	Strzegom Wiedeński	1.85 kg (35.2%)	79 %	10
Grain	Castle Cafe	0.2 kg (3.8%)	75.5 %	500
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.8%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Aroma (end of boil)	Tradition	20 g	10 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Notes

- Słody palone i czekoladowe na ostanie 10 min zacierania.  
*Dec 15, 2017, 10:24 PM*