

# Wytonkowany

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **38**
- SRM **32.5**
- Style **Robust Porter**

## 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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

## Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	2 kg (29%)	79 %	22
Grain	Fawcett - Pszeniczny Czekoladowy	0.2 kg (2.9%)	73 %	1001
Grain	Strzegom Czekoladowy 1200	0.2 kg (2.9%)	68 %	1202
Grain	Strzegom Pale Ale	3 kg (43.5%)	79 %	6
Grain	Pszeniczny	1 kg (14.5%)	85 %	4
Grain	Płatki pszeniczne	0.4 kg (5.8%)	85 %	3
Grain	Carafa III	0.1 kg (1.4%)	70 %	1400

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Warrior	25 g	60 min	15.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Spice	bób tonka	15 g	Secondary	7 day(s)

## Notes

- Tonka macerowana w mocnym alkoholu  
*Feb 3, 2018, 1:00 PM*