

Pomiędzy

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **20**
- SRM **16.1**
- Style **Mild**

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 **3.5 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **22.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (90.9%)	81 %	4
Grain	Strzegom Karmel 30	0.05 kg (1%)	75 %	30
Grain	Strzegom Karmel 300	0.3 kg (6.1%)	70 %	299
Grain	Strzegom Czekoladowy ciemny	0.1 kg (2%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lomik	30 g	60 min	4.6 %
Aroma (end of boil)	Lomik	20 g	15 min	3.8 %
Whirlpool	Citra	15 g	0 min	12 %

Yeasts

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