

Misio

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **17**
- SRM **19.1**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **74 C**, Time **10 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **74C**
- Sparge using **18.9 liter(s)** of **76C** water or to achieve **29.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (74.8%)	79 %	6
Grain	Brown Malt (British Chocolate)	0.5 kg (9.3%)	70 %	128
Grain	Strzegom pszenica prażona	0.25 kg (4.7%)	70 %	1000
Grain	Płatki owsiane	0.6 kg (11.2%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	15 g	60 min	5 %
Boil	Marynka	10 g	60 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar