

zamiatany fes

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **35**
- SRM **31.3**
- Style **Foreign Extra Stout**

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 **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.8 kg (59.4%)	79 %	6
Grain	Simpsons - Maris Otter	1.2 kg (18.7%)	81 %	5
Grain	Strzegom Monachijski typ I	0.5 kg (7.8%)	79 %	12
Grain	Carafa II	0.25 kg (3.9%)	70 %	1100
Grain	Jęczmień palony	0.25 kg (3.9%)	55 %	1200
Grain	płatki jęczmienne	0.4 kg (6.3%)	60 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	55 min	11 %
Boil	Sybilla	30 g	15 min	6.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale