owsiany stout

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **26**
- SRM **26**

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 **4.2 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **27.3 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **22.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **75C**
- Sparge using **8.5 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	3.6 kg *(68.6%)*	80 %	5
Grain	Caraaroma	0.3 kg *(5.7%)*	78 %	400
Grain	Płatki owsiane	0.6 kg *(11.4%)*	85 %	3
Grain	Płatki jęczmienne	0.3 kg *(5.7%)*	85 %	3
Grain	Fawcett chocolate	0.2 kg *(3.8%)*	71 %	1000
Grain	Fawcett - Brown	0.15 kg *(2.9%)*	72 %	180
Grain	Jęczmień palony	0.1 kg *(1.9%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	7 %
Aroma (end of boil)	East Kent Goldings	15 g	10 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
lutra	Ale	Slant	50 ml	omega labs