

V.3

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **32**
- SRM **39.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **21.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **67 C**, Time **10 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.919 kg (41.7%)	80 %	5
Grain	Strzegom Monachijski typ I	1.456 kg (20.8%)	79 %	16
Grain	Żytni	1.169 kg (16.7%)	85 %	8
Grain	Strzegom Karmel 600	0.574 kg (8.2%)	68 %	601
Grain	Karmelowy żytni Strzegom	0.294 kg (4.2%)	75 %	150
Grain	Strzegom Czekoladowy jasny	0.294 kg (4.2%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.294 kg (4.2%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Boil	lunga	20 g	20 min	11 %

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

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