Stout_v12 #123

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **48**
- SRM **32.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **19.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **28 %/h**
- Boil size **27.2 liter(s)**

Mash information

- Mash efficiency **87.6 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **27.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale - viking	2.6 kg *(51.9%)*	80 %	5.5
Grain	Viking - monachijski I	1.519 kg *(30.3%)*	78 %	16
Grain	Viking - monachijski II	0.2 kg *(4%)*	78 %	22
Grain	Viking - karmelowy 300	0.3 kg *(6%)*	73 %	300
Grain	Weyermann - czekoladowy pszeniczny	0.2 kg *(4%)*	72.7 %	1050
Grain	Viking - palony jęczmień	0.08 kg *(1.6%)*	73 %	1000
Grain	Wyermann - Carafa III special	0.11 kg *(2.2%)*	65 %	1400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	8 %
Aroma (end of boil)	Sybilla szyszka mokra	40 g	10 min	6 %
160 gr mokrej szyszki (mrożonej), ekwiwalent 40 gr suchej				

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

Aroma (end of boil)	Perle szyszka mokra	11 g	10 min	6 %
47 gr mokrej szyszki (mrożonej), ekwiwalent 11 gr suchej				
Aroma (end of boil)	Simcoe	9.6 g	10 min	14.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP090 - San Diego Super Yeast	Ale	Slant	150 ml	White Labs
gęstwa 23-dniowa				

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	1.5 g	Mash	---
Water Agent	węglan wapnia	5.5 g	Mash	---
Water Agent	sól epsom	1 g	Mash	---
Water Agent	kwas mlekowy [ml]	3.11 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Fining	mech irlandzki	3 g	Boil	10 min
Water Agent	kwas askorbinowy	0 g	Bottling	---

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