

## Stout\_v14 #132

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **62**
- SRM **36.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **18.3 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **24.7 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **80.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **20.1 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 **15.1 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 **15.6 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale Ale - viking	2.6 kg (51.7%)	80 %	5.5
Grain	monachijski I - viking	1.15 kg (22.9%)	78 %	16
Grain	monachijski II - viking	0.55 kg (10.9%)	78 %	22
Grain	karmelowy 300 - viking	0.068 kg (1.4%)	70 %	300
Grain	chocolate pale - fawcett	0.308 kg (6.1%)	70 %	625
Grain	czekoladowy jęczmienny - viking	0.1 kg (2%)	67 %	900
Grain	palony jęczmień - viking	0.08 kg (1.6%)	73 %	1000
Grain	czekoladowy pszeniczny - fawcett	0.062 kg (1.2%)	72.7 %	1050
Grain	carafa III special - weyermann	0.11 kg (2.2%)	65 %	1400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	11.5 %

Aroma (end of boil)	Hallertau Blanc	30 g	10 min	5.3 %
Aroma (end of boil)	Sybilla szyszka mokra	30 g	10 min	6 %
120 gr mokrej szyszki (mrożonej), ekwiwalent 30 gr suchej				
Aroma (end of boil)	Perle szyszka mokra	55 g	10 min	6 %
220 gr mokrej szyszki (mrożonej), ekwiwalent 55 gr suchej				

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	150 ml	Fermentum Mobile
gęstwa 1-miesięczna				

## 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	kwask mlekowy [ml]	3.11 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Fining	mech irlandzki	3 g	Boil	10 min
Water Agent	kwask askorbinowy	0 g	Bottling	---