

## Stout\_v16 #140

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **57**
- SRM **33.2**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **20.6 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **17.7 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **86.5 %**
- Liquor-to-grist ratio **2.92 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20.2 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 **72.7C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale - viking	2.6 kg (50.5%)	80 %	5.5
Grain	monachijski I - viking	1.15 kg (22.3%)	78 %	16
Grain	monachijski II - viking	0.55 kg (10.7%)	78 %	22
Grain	karmelowy 300 - viking	0.25 kg (4.9%)	70 %	300
Grain	chocolate pale - fawcett	0.3 kg (5.8%)	70 %	625
Grain	czekoladowy jęczmienny - viking	0.11 kg (2.1%)	67 %	900
Grain	palony jęczmień - viking	0.08 kg (1.6%)	73 %	1000
Grain	carafa III special - weyermann	0.11 kg (2.1%)	65 %	1400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	11.5 %
Aroma (end of boil)	CTZ	15 g	10 min	10.7 %

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	60 g	10 min	6 %
240 gr mokrej szyszki (mrożonej), ekwiwalent 60 gr suchej				

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	160 ml	Fermentum Mobile
gęstwa 1,5-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	chlerek wapnia [ml]	0 g	Mash	---
Fining	mech irlandzki	3 g	Boil	10 min
Water Agent	kwask askorbinowy	0 g	Bottling	---