

## stout m

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **30**
- SRM **26**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.1 liter(s)**

### Steps

- Temp **67 C**, Time **240 min**

### Mash step by step

- Heat up **16.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **240 min** at **67C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2.3 kg (48.9%)	85 %	7
Grain	Strzegom Czekoladowy jasny	0.15 kg (3.2%)	77 %	30
Grain	Carafa II	0.15 kg (3.2%)	70 %	812
Grain	Weyermann - Carafa III	0.15 kg (3.2%)	70 %	1024
Grain	Strzegom Karmel 150	0.25 kg (5.3%)	75 %	150
Grain	Strzegom Karmel 300	0.2 kg (4.3%)	70 %	299
Grain	extra special w	0.25 kg (5.3%)	73 %	256
Grain	Monachijski	0.45 kg (9.6%)	80 %	16
Grain	Płatki owsiane	0.8 kg (17%)	85 %	3
500 g laktozy				

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	17 g	90 min	9.4 %
Boil	Marynka	15 g	30 min	9.4 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
04	Ale	Dry	1 g	---