

## stout m w

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **25.6**

### Batch size

- Expected quantity of finished beer **33.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **35.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **44.3 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **26.6 liter(s)**
- Total mash volume **34.2 liter(s)**

### Steps

- Temp **67 C**, Time **240 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **26.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **240 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **25.3 liter(s)** of **76C** water or to achieve **44.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4 kg (52.6%)	85 %	7
Grain	Strzegom Czekoladowy jasny	0.25 kg (3.3%)	77 %	30
Grain	Carafa II	0.25 kg (3.3%)	70 %	812
Grain	Weyermann - Carafa III	0.25 kg (3.3%)	70 %	1024
Grain	Strzegom Karmel 150	0.4 kg (5.3%)	75 %	150
Grain	Strzegom Karmel 300	0.35 kg (4.6%)	70 %	299
Grain	extra special w	0.35 kg (4.6%)	73 %	256
Grain	Monachijski	0.75 kg (9.9%)	80 %	16
Grain	Płatki owsiane	1 kg (13.2%)	85 %	3
600g laktozy po skalowaniu 1kg				

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	90 min	7.1 %
Boil	Marynka	30 g	30 min	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
04	Ale	Dry	1 g	2x

## Extras

Type	Name	Amount	Use for	Time
Flavor	Laktoza	1 g	Boil	15 min