

Stout

- Gravity **24.9 BLG**
- ABV **11.6 %**
- IBU **67**
- SRM **50.3**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **14.8 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23 liter(s)**
- Total mash volume **30.7 liter(s)**

Steps

- Temp **54 C**, Time **15 min**
- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **15 min** at **54C**
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **3.4 liter(s)** of **76C** water or to achieve **18.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2.5 kg (32.6%)	85 %	7
Grain	Owsiany - Viking Malt	0.3 kg (3.9%)	61 %	5
Grain	Monachijski Jasny - Viking Malt	1 kg (13%)	80 %	16
Grain	Wiedeński - Viking Malt	1 kg (13%)	79 %	10
Grain	Wędzony Whisky (średni) Castle	1 kg (13%)	--- %	3
Grain	Karmelowy - - Viking Malt	0.5 kg (6.5%)	79 %	600
Grain	Karmelowy żytni Viking Malt	0.5 kg (6.5%)	75 %	150
Grain	Low Colour - Chocolate Malt	0.25 kg (3.3%)	60 %	600
Grain	Kawowy Castle	0.1 kg (1.3%)	79 %	500
Grain	Carafa (R) III - Weyermann	0.2 kg (2.6%)	70 %	1350

Grain	Weyermann - Carawheat	0.13 kg (1.7%)	77 %	97
Grain	Płatki owsiane	0.2 kg (2.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Nelson Sauvin	20 g	60 min	10.4 %
Boil	Agnus Cz	50 g	50 min	10.47 %
Aroma (end of boil)	Cascade PL	25 g	5 min	5.5 %
Dry Hop	Cascade PL	25 g	3 day(s)	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	30 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Flavor	Płatki dębowe	20 g	Secondary	7 day(s)