

Rye American Stout

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **64**
- SRM **37.5**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **24.3 liter(s)**
- Total mash volume **31.1 liter(s)**

Steps

- Temp **64 C**, Time **70 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24.3 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **70 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4 kg (59.3%)	85 %	7
Grain	Weyermann - Rye Malt	2 kg (29.6%)	85 %	7
Grain	Weyermann - Carafa III	0.5 kg (7.4%)	70 %	1024
Grain	Jęczmień palony	0.25 kg (3.7%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	15 %
Boil	Chinook	10 g	50 min	10 %
Boil	Cascade	10 g	50 min	5.5 %
Boil	Cascade	15 g	30 min	5.5 %
Mash	Chinook	15 g	30 min	10 %
Boil	Mosaic	20 g	5 min	11.8 %
Boil	Chinook	30 g	5 min	10 %
Boil	Cascade	30 g	5 min	5.5 %

Whirlpool	Mosaic	30 g	1 min	11.8 %
Whirlpool	Cascade	30 g	1 min	5.5 %
Dry Hop	Cascade	50 g	4 day(s)	5.5 %
Dry Hop	Mosaic	50 g	3 day(s)	11.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	250 ml	---