

Rye American Stout

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **65**
- SRM **40.3**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **26.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **27.1 liter(s)**

Steps

- Temp **65 C**, Time **70 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.4 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (51.6%)	79 %	6
Grain	Strzegom Monachijski typ II	1 kg (12.9%)	79 %	22
Grain	Żytni	1.5 kg (19.4%)	85 %	8
Grain	Weyermann - Carawheat	0.5 kg (6.5%)	77 %	97
Grain	Strzegom Czekoladowy 1200	0.25 kg (3.2%)	68 %	1202
Grain	Jęczmień palony	0.25 kg (3.2%)	55 %	985
Grain	Strzegom pszenica prażona	0.25 kg (3.2%)	70 %	1000

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	Citra	10 g	50 min	12 %
Boil	Cascade	15 g	30 min	5.5 %
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	---