

Sierra Nevada Ruthless Rye Clone

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **49**
- SRM **13.4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4.5 kg (76.3%)	79 %	6
Grain	Żytni	0.8 kg (13.6%)	85 %	8
Grain	Fawcett - Pale Crystal	0.3 kg (5.1%)	72.8 %	90
Grain	Strzegom Czekoladowy 400	0.3 kg (5.1%)	68 %	400

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Bravo	30 g	60 min	15.5 %
Boil	Chinook	30 g	0 min	13 %
Boil	Amarillo	15 g	0 min	9.5 %
Boil	Columbus/Tomahawk/Zeus	15 g	0 min	15.5 %
Dry Hop	Citra	40 g	4 day(s)	12 %
Dry Hop	Columbus/Tomahawk/Zeus	15 g	4 day(s)	15.5 %
Dry Hop	Chinook	30 g	4 day(s)	13 %
Dry Hop	Amarillo	15 g	4 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.3 g	Fermentis