

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 |