

# Winter Imperial stout

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **47**
- SRM **39**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **32.4 liter(s)**

## Steps

- Temp **64 C**, Time **90 min**

## Mash step by step

- Heat up **24.8 liter(s)** of strike water to **70.8C**
- Add grains
- Keep mash **90 min** at **64C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6 kg (76.2%)	80 %	5
Grain	Weyermann - Chocolate Rye	0.375 kg (4.8%)	20 %	493
Grain	Strzegom Czekoladowy ciemny	0.5 kg (6.3%)	68 %	1200
Grain	Płatki jęczmienne	0.5 kg (6.3%)	80 %	4
Grain	Jęczmień palony	0.25 kg (3.2%)	55 %	985
Liquid Extract	WES ekstrakt słodowy jasny	0.25 kg (3.2%)	80 %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	35 g	60 min	4.5 %
Boil	Pacific Jade	35 g	60 min	12.4 %
Whirlpool	Willamette	35 g	1 min	4.5 %
Whirlpool	Pacific Jade	35 g	1 min	12.4 %
Dry Hop	Willamette	30 g	7 day(s)	4.5 %
Dry Hop	Pacific Jade	30 g	7 day(s)	12.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Dry	11.5 g	fermentis
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### Extras

Type	Name	Amount	Use for	Time
Spice	czarny pieprz	10 g	Boil	0 min
Flavor	kawa aromatyzowana	50 g	Boil	1 min
Flavor	kawa armomatzowana	150 g	Secondary	7 day(s)
Flavor	laktoza	500 g	Boil	1 min