

Black widow

- Gravity **23.1 BLG**
- ABV **10.5 %**
- IBU **61**
- SRM **39.2**
- Style **Russian Imperial Stout**

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 **28.8 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **22.2 liter(s)**
- Total mash volume **32.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.2 liter(s)** of strike water to **77.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Malt	3.5 kg (34.7%)	80 %	7
Grain	Monachijski	2 kg (19.8%)	80 %	16
Grain	Płatki owsiane	1 kg (9.9%)	85 %	3
Grain	Brown Malt (British Chocolate)	0.3 kg (3%)	70 %	180
Grain	Jęczmień palony	0.4 kg (4%)	55 %	1200
Grain	Chocolate Malt (UK)	0.2 kg (2%)	73 %	1200
Grain	Special B Castle	0.2 kg (2%)	70 %	400
Grain	Pilzneński	2.5 kg (24.8%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	70 g	60 min	13 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	300 ml	Fermentum Mobile