

## #21 Hoppy Berliner Schwarze

- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **4**
- SRM **28.4**
- Style **Berliner Weisse**

### Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **66.2C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **32.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (44.4%)	80 %	5
Grain	Pszeniczny	2 kg (44.4%)	85 %	4
Grain	Castlemalting Black 1350 EBC	0.5 kg (11.1%)	68 %	1350

### Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Mandarina Bavaria	100 g	2 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	50 ml	Fermentis

### Notes

- Słód palony dodany na mash-out.  
*Jan 6, 2019, 2:46 PM*