

## # Polskie Torpedo

- Gravity **16.2 BLG**
- ABV ---
- IBU **45**
- SRM **8**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **3 %**
- Size with trub loss **19.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **0 min**
- Temp **100 C**, Time **60 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **77C**
- Keep mash **60 min** at **100C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **23 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (54.5%)	80 %	4
Grain	Strzegom Pale Ale	2 kg (36.4%)	79 %	6
Grain	Briess - Caramel Malt 20L	0.5 kg (9.1%)	76 %	39

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Aroma (end of boil)	Summer	25 g	15 min	5.3 %
Aroma (end of boil)	Summer	25 g	10 min	5.3 %
Aroma (end of boil)	Crystal	50 g	0 min	4.5 %
Dry Hop	Crystal	40 g	8 day(s)	4.5 %
Dry Hop	Citra	30 g	8 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale S-05	Ale	Dry	11.5 g	Safale
-------------	-----	-----	--------	--------